

**BRITISH SCHOOL OF ARCHAEOLOGY
IN EGYPT**

**AND EGYPTIAN RESEARCH ACCOUNT
THIRTIETH YEAR, 1924**

**THE
BADARIAN CIVILISATION
AND PREDYNASTIC REMAINS NEAR BADARI**

**BY
GUY BRUNTON
AND
GERTRUDE CATON-THOMPSON**

LONDON

**BRITISH SCHOOL OF ARCHAEOLOGY IN EGYPT
UNIVERSITY COLLEGE, GOWER STREET, W.C.1**

AND

**BERNARD QUARITCH
11 GRAFTON STREET, NEW BOND STREET, W.1**

1928

**THE UNIVERSITY
OF ILLINOIS**

LIBRARY

913.32

B777p

v. 46

Return this book on or before the
Latest Date stamped below.

University of Illinois Library

APR 26 1964

FEB 06 1996

MAY 12 1964

NOV 05 2001

JUL 23 1965

SEP 06 2001

JUN 24 1967

AUG 03 2004

FEB 27 1967

DEC 20 1967

FEB 28 1972

MAY 1974

JUN 14 1991

JAN 22 1993

L161—H41

BRITISH SCHOOL OF ARCHAEOLOGY
IN EGYPT

AND EGYPTIAN RESEARCH ACCOUNT
THIRTIETH YEAR

1924

THE
BADARIAN CIVILISATION

AND PREDYNASTIC REMAINS NEAR BADARI

BY

GUY BRUNTON, O.B.E.

AND

GERTRUDE CATON-THOMPSON

LONDON

BRITISH SCHOOL OF ARCHAEOLOGY IN EGYPT
UNIVERSITY COLLEGE, GOWER STREET, W.C.1

AND

BERNARD QUARITCH

11 GRAFTON STREET, NEW BOND STREET, W.1

1928

PRINTED IN GREAT BRITAIN
BY HAZELL, WATSON AND VINEY, LD.,
LONDON AND AYLESBURY.

913.72
87719
v. 46

BRITISH SCHOOL OF ARCHAEOLOGY IN EGYPT

PATRONS:

F.-M. VISCOUNT ALLENBY, G.C.B., G.C.M.G.
BARON LLOYD OF DOLOBRAN, G.C.S.I., G.C.I.E., P.C.

GENERAL COMMITTEE (*Executive Members)

HENRY BALFOUR	Mrs. C. H. W. JOHNS
NORMAN H. BAYNES	Sir HENRY MIERS
Prof. R. C. BOSANQUET	J. G. MILNE
EDWARD CLODD	ROBERT MOND
Mrs. J. W. CROWFOOT	F. C. MONTAGUE
Sir W. BOYD DAWKINS	*Miss M. A. MURRAY
*Miss ECKENSTEIN	P. E. NEWBERRY
N. EUMORFOPOULOS	F. W. PERCIVAL
Sir GREGORY FOSTER	Prof. PINCHES
Sir JAMES FRAZER	Sir G. W. PROTHERO
*Prof. ERNEST GARDNER (Chairman)	A. L. RECKITT
Prof. PERCY GARDNER	Dr. G. A. REISNER
Lord BISHOP OF GLOUCESTER	*H. SEFTON-JONES (Vice-Chairman)
Mrs. J. R. GREEN	*Capt. E. G. SPENCER-CHURCHILL
Mrs. F. LL. GRIFFITH	Mrs. STRONG
Dr. A. C. HADDON	Lady TIRARD
*BASIL HOLMES	*Mrs. R. E. M. WHEELER
*E. J. HORNIMAN	E. TOWRY WHYTE
Baron A. VON HÜGEL	C. L. WOOLLEY
Prof. A. S. HUNT	

Honorary Director—Prof. Sir FLINDERS PETRIE

Honorary Treasurer—*C. H. CORBETT, J.P.

Honorary Secretary—Lady PETRIE



Digitized by the Internet Archive
in 2015

<https://archive.org/details/publicationsofeg46brit>

CONTENTS

PART I

CHAPTER I		SECT.	PAGE
INTRODUCTION			
SECT.			
1.	The work and personnel	I	
2.	Miss Caton-Thompson's work	I	
CHAPTER II			
THE BADARIAN SITES			
3.	The discovery of the rippled pottery	I	
4.	The Badari site	2	
CHAPTER III			
DETAILS OF THE BADARIAN VILLAGES AND GRAVES			
5.	Explanation of Register	2	
6.	Cemetery 400-500	3	
7.	Cemeteries 1100, 1400	3	
8.	Hemamieh	4	
9.	North spurs, Badari	4	
10.	The Sheikh 'Esa site	4	
11.	Areas 5300, 5400	5	
12.	Area 5500	5	
13.	Groups 5520-5556	6	
14.	Area 6000	6	
15.	Cemetery 5100	6	
16.	Graves 5101-5114	7	
17.	Graves 5115-5124	7	
18.	Graves 5125-5134	8	
19.	Graves 5136-5149	8	
20.	Graves 5150-5165	8	
21.	Cemetery 5200	9	
22.	Graves 5317-5354	10	
23.	Graves 5355-5364	10	
24.	Graves 5365-5384	10	
25.	Graves 5385-5394	11	
26.	Graves 5396-5414	11	
27.	Graves 5417-5434	12	
CHAPTER IV			
THE BADARIAN GRAVES AND BODIES			
39.	The graves	18	
40.	The attitudes	18	
41.	Condition and wrappings	19	
42.	Segregation	19	
43.	Physical characteristics	20	
44.	Coffins	20	
CHAPTER V			
THE BADARIAN POTTERY			
45.	Rippling	20	
46.	Colouring	21	
47.	Classification	21	
48.	Black-topped classes	21	
49.	Polished Red and Fancy classes	22	
50.	Miscellaneous class	22	
51.	Smooth and Rough classes	23	
52.	Forms	24	
53.	Other details	24	
54.	Connexion with Predynastic pottery	25	
55.	Sequencing	26	

CHAPTER VI

THE BADARIAN AMULETS, BEADS AND SHELLS

SECT.	PAGE
56. Amulets and beads	27
57. Shells	27

CHAPTER VII

MISCELLANEOUS BADARIAN OBJECTS

58. Stone vases	28
59. Ivory vases	28
60. Human figures	28
61. Comparison with other figures	29
62. Bracelets and rings	30
63. Ear- and nose-studs	30
64. Slate palettes	30
65. Sequence of palettes	31
66. Ivory spoons and wands	31
67. Throw-sticks	32
68. Needles and pins	32
69. Bone tools	33
70. Baskets, and pottery models	34
71. Whorls and tusks	34
72. Stone rubbers and grinders	34

CHAPTER VIII

THE BADARIAN FLINT IMPLEMENTS

73. Winged arrow-heads	35
74. Tanged arrow-heads and celts	36
75. Saw knives and other forms	36
76. Flakes	37

CHAPTER IX

IDENTIFICATIONS OF BADARIAN SPECIMENS

77. Quadrupeds and birds	38
78. Shells	38
79. Botanical specimens	38

CHAPTER X

SUMMARY OF THE BADARIAN PERIOD

80. Date	38
81. Reasons for dating	39
82. Relation to Predynastic age	39
83. Climate and fauna	40

SECT.

PAGE

84. Clothing and ornaments.	40
85. Food and hunting	41
86. Industries	41
87. Trade	41
88. Social institutions	42
89. Burial customs	42

CHAPTER XI

THE PREDYNASTIC SITES

90. Qau	42
91. Hemamieh and Badari	43

CHAPTER XII

DETAILS OF THE PREDYNASTIC VILLAGES

92. Hemamieh village	43
93. Groups 1902-2091.	43
94. Spurs 1-3, Badari	44
95. Spurs 4-6, Badari	45
96. Groups 3149-3199.	45
97. Spurs 7-9, Badari	46
98. Spurs 10-24, Badari	47
99. General remarks	48

CHAPTER XIII

DETAILS OF THE PREDYNASTIC CEMETERIES

100. Cemeteries 000 and 100, Qau	48
101. Cemetery 200, Qau	49
102. Cemetery 1500-1800, Hemamieh	49
103. Graves 1504-1692	50
104. Graves 3507-3702	50
105. Graves 3703-3740	50
106. Graves 3802-3812	51
107. Graves 3823-3851	51
108. Graves 3904-3920	52
109. Graves 4601-4622	52

CHAPTER XIV

THE PREDYNASTIC GRAVES AND BODIES

110. Graves and wrappings	52
111. Attitudes	53

CHAPTER XV

THE PREDYNASTIC POTTERY AND POTMARKS

SECT.	PAGE
112. Black-topped and Polished Red pottery	53
113. Fancy and Cross-lined pottery	53
114. Decorated pottery	54
115. Rough and Town pottery	55
116. Potmarks	55

CHAPTER XVI

THE PREDYNASTIC AMULETS AND BEADS

117. Amulets	55
118. Beads of glaze and soft stones.	56
119. Beads of hard stones	56
120. First report by H. C. Beck	56
121. Second report by H. C. Beck	57

CHAPTER XVII

MISCELLANEOUS PREDYNASTIC OBJECTS

122. Stone vases	57
123. Palettes and maces	58
124. Combs, hairpins, and bracelets	58
125. Tusks and tags	59
126. Animal amulets	59
127. Wands and snuff-horn	59
128. Games, weapons, and tools	60
129. Human figures	60
130. Boats, lamp, and whorls	61

CHAPTER XVIII

THE PREDYNASTIC FLINTS

SECT.	PAGE
131. Knives and fish-tailed flints	61
132. Arrow-heads and flakes	61

CHAPTER XIX

IDENTIFICATIONS OF PREDYNASTIC SPECIMENS

133. Shells	62
134. Botanical specimens, Kew	62
135. Botanical specimens, Cairo	63
136. Wheat, and the timber trade	63
137. Basketry	63

CHAPTER XX

THE TEXTILES AND MATTING

(By Thomas Midgley)

138. Previous investigations	64
139. Method of examination	64
140. Summary of results	65
141. Details of samples 1-4	65
142. Details of samples 5-9	66
143. The matting	66

CHAPTER XXI

(By Flinders Petrie)

144. The Badarian skulls	67
------------------------------------	----

PART II

CHAPTER I

CONDITIONS OF THE SITE

SECT.	PAGE
1. Topography of the site	69
2. Aims of the work	69
3. The methods used	70
4. Nature of the deposits and geological stratification	72

CHAPTER II

THE ARCHAEOLOGICAL STRATIFICATION

5. General account	73
6. Lowest strata ; Badarian	74

SECT.	PAGE
7. Middle strata ; Amratian	76
8. Upper strata ; Gerzean	77
9. Close of the site and summary	78

CHAPTER III

SETTLEMENTS AND THEIR VALUE

10. Evidence from settlements and graves	79
11. Toukh	80
12. Bêt Khalláf	80
13. Abydos	81
14. Ballas	81
15. Nubia	81

CHAPTER IV				SECT.	PAGE
THE HUT CIRCLES					
SECT.			PAGE		
16.	Aspect and construction.	.	82	26.	Dog burial 94
17.	Contents of the circles	.	83	27.	The fish pit 94
18.	Summary	.	88		
CHAPTER V				CHAPTER VII	
THE BURIALS				THE INVENTORY	
19.	Introductory	.	88	28.	Area A1 94
20.	Pot burials	.	89	29.	Area A2 96
21.	Old Kingdom burials	.	90	30.	Area A3 97
22.	Burials of uncertain age.	.	91	31.	Area A4 99
CHAPTER VI				32.	Area A5 100
THE ANIMAL BURIALS				33.	Area A6 102
23.	Nature of the ox burials	.	91	34.	Area B1 103
24.	Analogous records	.	92	35.	Area B2 104
25.	Details of the ox burials.	.	93	36.	Area B3 104
				37.	Area B4 105
				38.	Area D 105
				39.	Area E 106
				40.	Area F 108
				41.	Area G 110
				42.	Area H 113
DISTRIBUTION LIST . . . . .				. . . . . 117	
INDEX . . . . .				. . . . . 123	

LIST OF PLATES

(With page references to description)

NO.	PAGES	NO.	PAGES
i. General view of Badari, and pottery	2, 20	dish with loom, and other objects	54, 59
ii. General map of Badari District	2	xlix-l. Badarian and Predynastic amulet bead Corpus	55-7
iii. Map of Cemeteries 100, 3700, 3800	48, 51	li. Predynastic stone vases	57
iv. Map of Cemeteries 5100, 5300, 5700, and 5800	6, 10, 13	lii. Predynastic slate palettes	58
v-viii. Register of Badarian graves and town groups	2	liii, liv. Miscellaneous Predynastic objects and potmarks	55, 60
ix. Badarian graves	18	lv. Predynastic potmarks	55
x. Badarian graves and grain-bins	10, 12, 24	lvi. Badarian and Predynastic flint implements	35, 61
xi. Badarian grain-bin, pottery groups, and shells	12, 24, 27	lvii. Predynastic flint implements	61
xii-xix. Badarian pottery Corpus	20-3	lviii. Predynastic huts and village objects	44, 46, 47
xixa. Badarian sequence dates	26	lix. Badarian and Predynastic textiles	64
xx. Badarian pottery and Group 5739	15, 20	lx. Predynastic and later textiles, basketry	63, 64
xxi. Badarian slate palettes	30	lxi. Badarian, Predynastic, and later matting	66
xxii. Badarian ivory spoons	31	lxii. Predynastic settlement, Hemamieh : key plan	69, 70
xxiii. Badarian objects in ivory, stone, and wood	28, 30, 32	lxiii. Do., ground plan	92
xxiv. Badarian human figures, and ornaments	28, 30	lxiv. Do., area sections	82, 83, 86
xxv. Badarian human figures, throw-sticks, and decorated bowl	24, 28, 32	lxv. Views of site, and typical stratification of deposits	69, 71-4
xxvi. Badarian grave groups	3, 7, 8	lxvi. Predynastic hut-circles	72, 83-5, 87, 92, 94
xxvii. Badarian grave groups	8, 14, 15	lxvii. Predynastic hut-circles	72, 82, 84-7
xxviii. Badarian flint implements	35-7	lxviii. Ox-bone piles	72, 85, 92-4
xxix. Badarian flint implements and Predynastic forked lances	35-7, 61	lxix. Animal burials and human pot-burial	89, 93, 94
xxx-xxxiii. Register of Predynastic graves and town groups	48-52	Objects from :	
xxxiv. Predynastic grave, slate palettes, maces, and ivories	52, 58, 59	lxx. 0-1 ft. level	77, 78
xxxv-xlvi. Additions to Predynastic pottery Corpus	53-5	lxxi. 1 ft.-1 ft. 6 in., and 1 ft. 6 in.-2 ft. levels	78, 86
xlvi. Predynastic town pots and contents	45, 55	lxxii. 2 ft.-2 ft. 6 in., and 2 ft. 6 in.-3 ft. levels	76, 77, 83, 86
xlvi. Predynastic hippopotamus pot,		lxxiii. 3 ft.-3 ft. 6 in., and 3 ft. 6 in.-4 ft. levels	76, 83, 85
		lxxiv. 4 ft.-4 ft. 6 in., and 4 ft. 6 in.-5 ft. levels	75, 83, 86, 88

NO.	PAGES	NO.	PAGES
	Objects from (<i>continued</i>):		Flint implements (<i>continued</i>):
lxxv.	5 ft.-5 ft. 6 in., and 5 ft. 6 in.-6 ft. 6 in. levels 75, 83, 86	lxxxi.	2 ft. 6 in.-3 ft. (<i>cont.</i>), and 3 ft.-3 ft. 6 in. levels 75-7, 87
lxxvi.	(a) Objects from beneath breccia 72, 75 (b) Cist burial No. 117 89	lxxxii.	3 ft. 6 in.-4 ft., and 4 ft.-4 ft. 6 in. levels 75, 76, 85, 86
lxxvii.	Predynastic settlement pottery types 83, 89	lxxxiii.	4 ft.-4 ft. 6 in. (<i>cont.</i>), and 4 ft. 6 in.- 5 ft. levels 75, 76, 83, 86, 87
	Flint implements:	lxxxiv.	5 ft.-5 ft. 6 in., and 5 ft. 6 in.-6 ft. levels 75, 76, 88
lxxviii.	Surface to 1 ft. level 75, 77, 78	lxxxv.	(a) 6 ft.-6 ft. 6 in., and beneath breccia 72, 75, 76
lxxix.	1 ft.-1 ft. 6 in., and 1 ft. 6 in.-2 ft. levels 75-8		(b) Sherds and flints from huts and fillings. 69, 78, 84, 85-8
lxxx.	2 ft.-2 ft. 6 in., and 2 ft. 6 in.-3 ft. levels 75-7, 88		

ERRATA

In Index, p. 122, Bardarian *should be* Badarian,
and p. 124, Fints *should be* Flints.

THE BADARIAN CIVILISATION

PART I

By GUY BRUNTON

CHAPTER I

INTRODUCTION

1. THE excavations described in the present book were a part of the work of the British School of Archaeology in Egypt during the three seasons 1922-3, 1923-4, and 1924-5. All discoveries of dynastic date are recorded in the three volumes entitled *Qau and Badari*, and this publication is confined to the description of the cemeteries and settlements of Predynastic age, including the earliest remains of that period which have so far been discovered. These have been called Badarian from Badari, the *merkaz* town of the district in which the sites are situated. All through this book, the terms Predynastic and Badarian are used to define different periods: by "Predynastic" is meant the age which is now so well known from the work of Professor Petrie and others, and which has been subdivided into the three divisions of Early (or Amratian), Middle (or Gerzean), and Late (or Semainian); by Badarian is meant a new period of the Predynastic age which precedes that known as Early.

Full details of the personnel, camps, and general method of work have been given in *Qau and Badari I*, and need not be repeated here. In the first two seasons, my wife and I were most ably and devotedly assisted by Mr. C. H. G. Bach and Mr. J. L. Starkey. During the second season, Mrs. G. B. Aitken and Miss Irene Donne (now Mrs. Duke Burton) joined our camp and gave great help in the preservation of antiquities, and other matters, while Mr. Terence Gray stayed with us for a month, devoting himself specially to the skulls and packing. The third season, which was a short one, my wife and I were alone, or with Miss Caton-Thompson. In March 1925, when I had to go into hospital at Assiut, Mr. Starkey, then Field Director of the Michigan University Expedition, and Mr. Rex Engelbach, Curator of the Cairo Museum, most generously left their own work, and helped my wife with the final recording, packing, and closing down of the camp.

2. Miss Caton-Thompson spent most of the 1923-4 season in Professor Petrie's camp at Qau. During the next year her work was partly in the Fayum, and partly at Hemamieh, between Qau and Badari. When working at Hemamieh she camped with us; but her work on the Predynastic settlement there was quite independent of mine, which was mostly in cemeteries near Badari. She has fully described it in the second part of this book. At the end of the season she gave us much help in the recording of graves.

CHAPTER II

THE BADARIAN SITES

3. DURING our 1923 excavations in the great cemetery of the Dynastic age at Qau el Kebir (Etmanieh), more especially in the region known as Cemetery 400, adjoining the houses of Ezbet Ulad el Hagg Ahmed, a few sherds of hand-made pottery with a peculiar rippled or combed surface had turned up from the rubbish of that much used piece of ground. This pottery was unlike any, so far, found in Egypt and could not be assigned to any known period, though its affinity with the Predynastic or Nubian was evident. The interest in it was much increased by the discovery of the grave 569 with its remarkable group of objects. This, however, was but a chance survival from what had perhaps been a considerable cemetery of the people using this rippled pottery. It strongly emphasized the connexion with the Predynastic age, but left us still in the dark as to the exact period to which the culture might be referred.

Later in the same season, a few graves were found in the level ground at the foot of the cliffs where the great rock-tombs of the nobles are situated. These graves had been almost obliterated by later burials, chiefly of the Roman period, and we did not glean much from them. No other similar remains were found at Qau, nor did Professor Petrie, in his

work there in 1924, find any more remains of the Predynastic period.

A search of the low desert strip to the north was made by Mr. Starkey, for a distance of some 10 miles as far as the town of Badari; in the course of this, he found many more rippled sherds, which indicated the existence of considerable cemeteries or settlements of these people. Our second season's work, which was partly at Hemamieh but mainly near Badari, culminated in the finding of the long-sought cemetery close to the village of Sheikh 'Esa. Time did not allow of a complete examination of this locality, so that a third short season's work was necessary to clear all ground where there was a chance of finding these early graves. This third season was almost exclusively devoted to the excavation of Badarian cemeteries.

4. A general account of the lie of the land has been given in *Qau and Badari I*, and the Qau and Hemamieh sites need not be further described. The Badari strip of low desert between the cliffs and the cultivation extends for about 6 miles, from the point or cape near Naga Wissa on the north to that just south of Sheikh 'Esa. It is never more than half a mile wide, at most, and consists of a succession of gentle spurs running out from the cliffs to the fields, divided by shallow depressions which can hardly be called *wadis*. These spurs are covered by limestone detritus washed down from the cliffs, and are now being very slowly eroded. One great gorge at the south end close to the village of Sheikh 'Esa debouches in a large *wadi*, and forms a prominent landmark. Floods of water descend here from the high desert after the rain-storms which occur every few years; one such occurred in November 1923, when our house was nearly washed away, although placed on rising ground under the cliffs to the south of the *wadi*. Gazelles descend occasionally from the high plateau by way of the gorge, attracted by the growing crops. It is surprising that they can exist at all on the high desert, where vegetation seems to be almost non-existent.

A sketch-map of the Badari strip of low desert with its many spurs is shown on pl. ii. For convenience of description the spurs, when clearly defined, have been given numbers. This applies to the northern part only. In the south the ground is more generally flat, and, except near the great gorge, is not of sufficient interest archaeologically to need detailed reference. To the north of spur 1, the cliffs approach the cultivation very closely for

some distance, and we found no ancient sites or remains of any importance.

The photograph on pl. i is a view looking north over the great *wadi*. Cemetery 5100 is in the centre foreground. The village with the white house is Sheikh 'Esa.

The majority of the graves in Cemeteries 400, 1500-2100, 3100, 4800, and 5200, are of dynastic date; the plans are therefore given in *Qau and Badari I*, pls. v, vi, viii, and ix.

CHAPTER III

DETAILS OF THE BADARIAN VILLAGES AND GRAVES

5. THE Grave Register (pls. v-viii) contains all the principal details of each grave or village group. Dimensions are given in inches, first the width or north side, then the length or east side, and lastly the depth below the present surface. Where there was no true grave, but only a group of objects in a hollow, the word "Hole" is used. Where no dimensions are given, it is in most instances because the sides of the grave were too indistinct or damaged to be measurable with any accuracy. The azimuth is the general direction of the long axis measured by prismatic compass. When the letter denoting the direction of the head is underlined, it means that the body was lying on its right side. All others are on the far more usual left. Where the letter C occurs in the Sex column, it indicates that the bodies were immature, and therefore not sexable with certainty; these may be infants or nearly full-grown individuals. The size of the grave gives a rough indication of the age. Under the head of "Wrappings" are many references to matting. Where there is no entry, it is not to be inferred that there had been no matting in the grave, merely that it was not observed. Only in very rare instances could it be definitely stated that the matting was absent. The pottery column is subdivided so that the seven classes can be kept distinct. The number of beads of each type is indicated in the little circles over the type number. The letters S and F in place of a number mean "String" or "Few." The shells are more closely defined in the chapter on the identifications (VIII). Slate palettes which are not drawn are marked with a cross; they are either scraps or else photographed in their groups. The letters N, P, and Q, under the heading "Disturbed," mean Not, Partly, and Quite. The

Section column gives the reference to that part of the text where more information about any particular grave may be found.

QAU

6. *Cemetery 400, 500.* This piece of ground is now a rubbish-heap for the inhabitants of Ezbet Ulad el Hagg Ahmed. It had constantly been used as a burial-ground in ancient times, and Badarian, Protodynastic, vi-xiith dynasty, early xviiiith dynasty, xxvith dynasty, Ptolemaic, and Roman graves were all found there. Over all were remains of Roman or Coptic houses. A plan of the cemetery is given in *Qau and Badari I*, pl. v. The whole of this ground was very thoroughly turned over, except in the low-lying region to the east (graves numbered 800). During the excavation a few apparently very early objects were turned up in the rubbish, but there were no characteristically Predynastic graves. Two tightly contracted burials, head south, face west, without any objects, may be of that date, but are more likely to be Badarian. A flint arrow-head (pl. lvi, 2), a rough flint, a slate palette (pl. xxi, 12), and three pots AB3, BR34p, and BB64c, all found loose in the general rubbish, are of the Badarian age, and they imply that a cemetery had then existed on this spot. One grave only could with certainty be ascribed to it, and that was no. 569.

569. At a depth of 90 ins. under the present surface, this grave was discovered in the sandy gravel. The soil was so loose that it is not possible to give measurements, but it was a large grave, with plenty of space for objects round the body. All that remained of the body was the legs and one arm. The legs were apparently undisturbed, the knees sharply bent; they showed that the head had been to the south, facing west. The body had not been tightly contracted, as the thighs made an obtuse angle with the probable line of the spine, judging from the general axis of the grave. Scattered along the west side near the arm were three pots, the large rough RB37h, the beautifully rippled bowl BB3d, and the very curious type with four handles, MS7, of fine pinkish ware. Near the feet was an undisturbed group of three objects: the beaker of black pottery with incised decoration filled in with white, MS24, containing charcoal; a large flint knife; and a slab of selenite. For the group, see photograph, pl. xxvi. The selenite had traces of wood round it, just possibly from a frame. If so, it

may have been used as a mirror. Grave plan, pl. ix, 27.

569a. Some 7 ft. to the south of 569, at precisely the same level, was a mud coffin with rounded corners, 18 × 25 ins., containing a tightly contracted body, head south, on its left side. This had no objects with it but, judging from the coffin, was of Late Predynastic, or more probably, Protodynastic date. Under the south end of the coffin was a plain rectangular slate palette (pl. xxi, 3), with traces of red paint on it. It seems quite likely that this had been part of the outfit of grave 569, close by; the robbers had left it, and the later burial was placed over it.

7. *Cemetery 1100* was on rising ground to the south of Cemetery 400, and formed another part of the great general cemetery of Qau; see *Q. and B. I*, pl. iii, near Point X. The stone celt (pl. lvi, 3) was found here at 8 ins. down; but no other remains of Badarian or Predynastic age came to light.

7193. This was an xviiiith dyn. burial found by Professor Petrie at Qau during his work there in 1924. With the later pottery was the Badarian pot RB44m.

Cemetery 1400. This formed part of the large burial-ground below the great rock-tombs of the nobles, in the level area to the south-east, bordering on the *wadi*. The ground had been much used for Roman burials, and had been terribly plundered, but a few remains of a Badarian cemetery were forthcoming. Four pots were found loose, BB16e, 69h, BR30e, and SB3h; also a scrap of black ware with incised lines filled in with white like that of the beaker from 569, MS24.

1411. Adult male, tightly contracted, right hand before face, left above knees. The one pot was close to the head. Oval grave.

1414. Partially disturbed. Traces of malachite in the grave, and many bones stained bright green. Two pots and an ostrich egg, badly smashed. This egg had been turned into a bowl by cutting off part of the side. The smoothed rim was bordered with a row of holes. The egg had been broken anciently and repaired by drilling holes beside the cracks for the insertion of lashings.

1416 and 1421. These were thoroughly disturbed, and the contents may have been mixed. A Roman burial intruded on the two earlier graves, and that again had been completely plundered. The ivory spoon, pl. xxii, 5, and the pot SB15e, may therefore belong together.

HEMAMIEH

8. Both north and south of the Hemamieh *wadi* a few remains of the Badarians were turned up in the general rubbish. To the south, in the region of the graves numbered 1700, we found pots of types BR3h and 47h, and MS4, also one flint arrow-head (pl. xxix, 3) and a flint knife (pl. lvii, 4). Another dagger of this type comes from a Predynastic village (pl. lvii, 4, 3000/6). There were here several Predynastic graves of the Early and Middle periods, as well as many of dynastic times, but none that could be called Badarian. To the north of the *wadi*, where the graves are numbered 1900 and 2000, there had been a Predynastic settlement; see Section 92. This probably began in the Badarian age, as a few of the characteristic pots were found here (types PR6e, 16f, BR41e, 51f, and AB7); also a flint arrow-head, pls. xxix, 3, lvi, 1. Two graves in this area are also of this date. They were probably in a burial-ground placed to the south of the village.

1992. An undisturbed immature male (?), contracted, thighs at right angles to spine, and hands before face. Three pots of rough brown and of black-topped red polished ware near the head in the south-west corner of the grave.

1994. See Section 93.

2015. Tightly contracted adult in oval grave, head missing, and a scrap only of pelvis remaining. Wrapped in matting. One pot, BB47h, at south end near the hands, and a flint knife behind the back (pl. lvii, 2).

BADARI

9. None of the spurs which we examined yielded any certainly Badarian objects until we reached spur 11, where one oval rippled pot, AB5, was found. Two graves, 3507 and 3920, are registered as Predynastic, but may quite well be Badarian. Two rippled sherds turned up in a xviith dyn. grave on spur 23. In Cemetery 4800, close to the modern village of Sheikh 'Esa, among the mass of graves of the vi-xith dynasties were three Badarian interments and a couple of loose pots, BB31p and 61k.

4803. Traces of matting and wood, but completely disturbed. One pot, BR3d; a long well-made flint arrow-head of the winged type; an ivory finger-ring; and a few shells.

4810. An old male, head south, in oval grave, completely disturbed except part of the spine. Reed matting and sticks. One pot, BB57p.

4848. Oval grave with trace of matting at the side. Adult female contracted, thighs at right angles to spine, hands before face, head south. Two pots in fragments, the sherds scattered in the filling. Both were of black-topped brown polished ware, and one was probably like BB61k with holes drilled for mending.

10. The area which was richest in Badarian remains was that stretching from the village of Sheikh 'Esa southwards to the edge of the great *wadi*; see map pl. ii. In 1924 we worked out completely the ground marked 5100; it was practically all Badarian cemetery. We also found a few other graves in the Cemetery 5200 to the north which had been used over and over again in later times, and so badly plundered that it was not practicable to work it through thoroughly. In 1925 we systematically cleared the whole spur marked "Cemetery 5300-5400," and also explored the ground marked 5500, which seems to have been the site of a Badarian village. Various objects were turned up in the ground around, and occasionally in the filling of, the later graves. This village may even have extended to the tip of 5300 spur; there were no Badarian graves there, but a few sherds and flints of the period. Under the cliffs at 5600 were a few more graves, but all robbed and the ground re-used. The spur just north of the *wadi* is mainly occupied by the modern Coptic cemetery of Bayadiyeh; we cleared round the edges of this and found many Badarian graves tightly packed together, probably all part of the same cemetery as 5100. South of the *wadi* were very scanty remains of an early village, close to the fields on the west, and one or two graves (numbered 6000) close to the *wadi* bank to the eastward. The ground had been re-used for ist dynasty graves, and also for later ones, and very badly plundered. This area was not completely cleared, as a prolonged search yielded nothing of interest. We see, then, that the main village was probably at 5500, straggling north to the tip of spur 5300, and south to the tip of 6000 across the *wadi*. There were two main areas for graves, that to the north (5300-5400), where the whole of the available ground was not occupied, and that to the south (5100, 5700, 5800), where all available space was used except perhaps the extreme western end of the spur. The ground due east of the main village also contained burials (5200, 5600).

It will be as well first to give an account of the

village remains, and after that the details of the graves in order of number.

THE VILLAGES

11. *Area 5300, 5400.* Various sherds of fine yellow-brown ware, black-topped and black inside, with angles between the straightish side and rounded base, finely polished inside rim, not rippled. Fragments of pots of other forms, but not rippled. In one of the Roman graves occupying the old village site were fragments of a fine dish of polished red ware, PR3f, with broad flat rippled rim. This is no doubt contemporary with the sherds found in the vicinity. Some pots, whole or sufficiently complete to be drawn or typed, were also found. These are AB2, 11, 12, 13, BB31p, 52e, MS6, 13, 18?, 20, RB25e, 36e. Two pieces of thick vessels of black basalt are drawn, pl. xxiii, 9, 10. There were also fish-spines, pointed implements of bone (awls or borers) like those shown on pl. lviii, 5 (from a Predynastic settlement), a bone tool with chisel-shaped end (pl. xxix, 2), and the tip of a second. The pierced pottery disk 1 in. in diameter (pl. xxvii, 5) is like those so often found in the Predynastic villages. Of hard grey igneous stone are a small conical grinder with flat base, a grain rubber, and a spheroidal object 2 ins. in diameter, of uncertain use. The most interesting of the flints found are shown in pl. xxviii, 6. The serrated flint, marked 5300, came from a Roman grave. The long implement in the centre of the group seems to be a rough imitation of the bone tools with chisel ends, mentioned above. A broken arrow-head of the usual form, and a *tanged* arrow-head are shown in pl. xxix, 5.

In addition to these remains, various other objects may come from village rubbish or may have been thrown out from graves. The pottery comprises a small brown cup, SB31m; scraps of an ornamented bowl, BR15m; a pot lined with basket-work, RB31m; the curious rectangular pot MS11; and the pot RB31h, which was found standing on the original desert surface. A scrap of black pottery (MS25) is interesting, as it is incised with lines filled in with white, like Class N in the Corpus of Prehistoric pottery, and like the beaker from grave 569 already mentioned. Another scrap is of the fine polished bright red ware, like the Early Predynastic, and also like the dish PR3f.

Shells found were a string of *Oliva*, *Ancillaria*, and *Mitra*; two *Nerita*; and a *Spatha rubens*, all prob-

ably from graves. Other ornaments are two clay ear-studs, pl. xxvii, 5. There was also a curved needle of bone.

A few special objects or groups of objects from this spur were given numbers. They are all probably village remains.

5382. To the north-west of the cemetery we came across a large bin of sun-dried mud, with its mouth only a little under the surface. It was 35 ins. high, 39 × 36 ins. across at the base, and 18 × 16 ins. at the mouth, and almost circular. A photograph is given in pl. x, 5. The mouth was closed by a rough slab of limestone. Except for sand and stones, there was nothing inside. It seems to have been intended for the storage of grain.

5450. A round hole 53 ins. in diameter and 33 ins. deep, containing one large black-topped pot, RB49m. There were no graves in the vicinity (see plan, pl. iv), and this was presumably a village deposit.

12. *Area 5500.* Here there were no Badarian graves, though there were some tombs of various later dates. It seems to have been the centre of the Badarian town.

The single objects found consist mainly of pottery. The forms are: BB14e, 23e, 31b, 61k, 77k, 77p; PR4h; AB10; MS1, 5, 10, 14, 16, 19, 22; SB7h; RB14h, 23f, 27k, 27t, and 31h. BB14e and 31b were found together at a depth of 14 ins.; 23 was 10 ins. down; 77k had its mouth apparently flush with the old desert surface (pl. xx, 12). There were three of the red polished cylindrical vases, MS5, lying side by side, 10 ins. deep, in very bad condition owing to salt. Type RB27k occurred three times. One was standing 30 ins. deep under present ground-level, in a slight depression in the old desert surface; the bottom had been broken away anciently. The second was alongside 27t and 31h; this specimen had a notched rim. There was ashy earth round them, containing two burnt flint flakes. The third was also standing on *gebel*, near a vith dyn. tomb. A similar cooking-pot was found with the bottom of a rush basket crushed into it; this may have been a lid, or else general rubbish.

Other remains were a number of the common bone piercers like those in pl. lviii, 5; a *Mutela dubia* shell, with the edge ground down, and pointed at one end; an ear(?) -stud in pottery; a hard stone rubber, 4½ ins. long, coloured red (for grinding paint?); and a thin flat oval grey stone. A selection of the many rough flint flakes is shown in

pl. xxviii, 4. There was also the broken winged arrow-head, and a leaf-shaped lance(?)—head, both pl. xxix, 5. The groups of objects specially numbered are :

13. 5520. Lying on its side was the black pottery bottle AB9 (pl. xx, 11), with the bowl SB37e right way up, close against it. These were 27 ins. down and 9 ins. above the old surface. Ten feet to the west, 40 ins. down, standing on the original *gebel*, was the large pot RB36e.

5527. A group of the roughest flints, including cores, shown in pl. xxviii, 1, from a depth of 10 ins.

5548. An interesting group of objects found all together 8 ins. below the present surface, close to the remains of a large rough cooking-pot like RB27k. As far as could be made out, there were three baskets. One was round, and contained two slabs of black and white porphyry, one 7×5 ins., the other $9\frac{1}{2} \times 5$ ins., rectangular, with rounded corners. The second basket, also round, contained the cylindrical jar of ivory, pl. xxiii, 5. The third basket was small, square, and empty. With these were a grinding pebble of brown jasper, a pink limestone whorl (pl. xxiii, 30), and two pairs of small horn cores.

5550. This was a little collection of six worked flakes of rock-crystal found in the filling of one of the sixteenth dyn. tombs on this site.

5555. A group of three cooking-pots found in position, standing in slight hollows in the ancient desert surface. Just over them were the remains of the brick walls of a house of the Roman period. A sketch of these is given on pl. xi, 5, showing how these pots were found undisturbed immediately beneath the floor of a house built several thousand years subsequently. Alongside the three were hollows for two more. The types of those found are given in the sketch. Pot A was 65 ins. away from pot B. All three contained charcoal and chopped straw (*tibn*).

5556. A similar group of seven pots is shown in the sketch pl. xi, 2, where the types are listed. Pots A and C were 62 ins. apart. Pot B was roughly finger-rippled on the outside. A photograph of the pot type MS2 is given in pl. xx, 15. None of the vessels contained anything, but the ground around was full of ash and charcoal. Alongside A was the mandible of a small ruminant (gazelle?).

14. Area 6000, on the south bank of the great *wadi*, was the site of a Badarian village at the western end, with a few graves to the east near the cliffs. The pottery types found here were

BR57h, standing upside-down, and 41k, photograph pl. xx, 14; AB8, standing on *gebel*; the scraps MS21 and 23; RB3m, 27k on *gebel*, 27m also on *gebel* with two rough flint flakes, 31r standing on *gebel*, roughly finger-rippled, and 37h. There was also the small bin of sun-dried mud, like pl. xi, 1, but with a wider mouth (pl. x, 3), and the usual sherds and ash. Smaller objects are part of an ivory bracelet with knobs, and pierced with holes for mending, a nail-shaped ear(?)—stud in pottery, pl. xxvii, 5, and a little pottery hippopotamus (?), pl. xxvii, 5. The usual pointed bone implements were also found, as well as flint flakes (pl. xxviii, 2) and one arrow-head (pl. xxix, 5).

6014a. Bin of sun-dried clay (pls. xi, 1, x, 3), standing at the north-west corner of the spur. In it was the small pot MS9.

THE CEMETERIES

15. Cemetery 5100 was situated to the north of the great *wadi* just under the cliffs, on the highest part of the spur. A modern Coptic cemetery occupies the centre of this, and probably overlies Badarian graves. The photograph, pl. i, shows the modern graves in the foreground to the left, with Cemetery 5100 to the right of it, at the foot of the steep slopes. Almost in the centre of the view, at the top of the *wadi* bank is a *sheikh* or modern holy place, consisting of a few prayer-mats surrounded by a semi-circle of model houses in clay in which lighted candles are occasionally put at night. There is no burial here, according to the natives, but the spot is one of considerable sanctity, and we could only therefore excavate to within a reasonable distance of it. There did not, however, seem to be any graves close to it, and I do not think we left any undiscovered in that locality. The burials of Cemetery 5100 seem to have been of the more important people, judging from the scanty remains; for all had been sadly plundered in ancient times. It is conceivable that the area of sanctity of the modern *sheikh* is a survival from the earliest times, and that the spot was specially selected by the more influential Badarians as a desirable burial-ground.

There was one grave in this area, 5102, with a chamber on west, re-used in the xviiith dyn., but still containing a few beads of the original burial of the vth dyn.

Some antiquities were found loose in the rubbish, or isolated in graves. The pots were the types BBrom, 28h, 31hkm, 44h, 64h; BR5p, 7h, 9hm,

16t, 28f, 38fj; PR9dt; MS3; SB33h; and RB14h, 16h, 31kr, 36f, 41f; also two model boats of pottery. One piece of a basalt vase was decorated with vandykes scratched below the rim, pl. xxvii, 2, xxiii, 11, and there was one slate palette, pl. xxi, 14. Miscellaneous finds were cloth, pl. lix, 1-4; scraps of a square-bowled ivory spoon like pl. xxii, 6; a string of *Ancillaria* shells; a large *Spatha* shell; part of a hippopotamus tusk; a fish spine; crocodile plates; scrap of a flat wooden handle just conceivably used for a flint knife; a few flint flakes; and the flint arrow-head pl. xxix, 6.

16. 5101. Oval grave. Body missing. A few beads in the filling, with the various objects detailed in the Register. The piece of horn or thick hide is a flat strip, 4 ins. long and about 1 in. wide, widening to 2 ins. Of the two pots, BR10f was at the south end of the grave, and BB47m at the east.

5105. No bones left, only a group of objects valueless to a plunderer. *Spatha* shell, a small piece of horn long, thin, and straight, a polishing pebble, a fish spine, and a natural flake of selenite.

5107. This was the grave in which the very remarkable female statuette was found (pls. xxiv, 2, xxv, 3, 4). No bones left. Loose in the filling, in addition to the ivory figure, were a polishing pebble and a few cylinder beads of steatite and turquoise (?).

5108. Two pots at the west side of the grave; nothing else remained.

5109. Usual oval grave, with the legs, pelvis, and lumbar vertebrae alone left. The thighs were roughly at right angles to the spine; the head had been to the south. One pot on the west side of the grave, and therefore, if still in position, before the face.

5110. Body of an adult female, disturbed, head to the south-east, lying on left side, and covered with matting. The head itself was wrapped in linen. One rough translucent pebble pierced for suspension. Remains of a small basket, and a small piece of bone decorated with rows of incisions, of unknown use (pl. lxi, 6; see Section 45). The materials are discussed by Mr. Thomas Midgley in Chapter XX.

5111. Oval grave containing matting and sticks. No bones, but an unusual number of objects. At the south end of grave, the pots BB31m, 35k; at the north end, and therefore presumably at the feet, RB25k; SB41k was in the filling. A few shells and beads in limestone and steatite, scattered. The other objects are mostly shown in the photograph, pl. xxvi; they are: three pebbles, long slate palette

with slightly hollowed ends, a lump of ground malachite mixed with some material to make a paste, grinding pebble, bone needle, bone awl or borer, two pottery ear(?) studs, small ivory vase with lugs containing malachite paste, a flint arrow-head, and a bent copper pin. Not shown in the photograph are part of an ivory bracelet (pl. xxiii, 12), five other pebbles, fish spine, three flint flakes, five ivory pins or teeth of a comb, and scraps of a basket.

5113. The remains of a small carnivorous animal (jackal or dog?), lying head to the south and covered with matting.

5114. Quite plundered. One pot, BB5d, a scrap of wood pierced and with a rippled surface, a grinding pebble, and a piece of hippopotamus tusk.

17. 5115. Remains of an adult male, with matting. Parts of an ivory bracelet (pl. xxiii, 22), and a crocodile plate.

5116. An oval grave containing sherds from two pots, too fragmentary to be drawn. Besides these were a set of six small flints, comprising an arrow-head, four leaf-shaped flints, and a pointed flint with straight end. The last five were very small, less than 2 ins. long, and beautifully worked. The whole group is shown, almost full size, in pl. xxix, 6.

5117. A round hole, about 3 ft. in diameter, containing a sandstone grain-rubber, and a pierced disk of ripple-surfaced pottery. There were no bones, and this circular hole was perhaps not intended to be a grave. Both the grinder and the disk are objects common in villages, but not as a rule found in graves.

5118. A small oval hole which may or may not be a grave. No bones left. Two flint flakes, and the head of an ivory pin or stick, with circular grooves cut round it as ornament (pl. xxiv, 5). For the group, see photograph, pl. xxvii, 2. There was also a rough pierced pebble.

5120. Oval grave with matting at the sides, body removed. Only a sherd or two of pottery. There were, however, four flints: two arrow-heads, shown in large size in pl. xxix, 6, a fine double saw-edged knife or dagger, and a flake; with them was a pottery ear(?) stud. For the whole group, see pl. xxvi.

5121. A contracted female with hands before face, head east on left side. One pot, SB3k, behind the back, but the burial had been disturbed.

5122. Remains of a much decayed pot standing in a small hole 30 ins. deep.

5123. Round hole containing remains of three bodies, but nothing else. This can hardly have been a grave: we found no other instances of multiple burials. Probably grave robbers had dumped the bodies here.

5124. An oval hole, like a grave, but containing no trace of bones. The scattered contents were a polished red bowl, fragments of an ivory wand-like object, three flint flakes, a stone grain-grinder, and a mass of some organic matter probably of vegetable origin.

18. 5125. Round hole with one pot, a flint arrow-head, and a pierced pottery disk. Graves 5117, 5124, 5125, were close together, and none seem to be true graves.

5126. Robbed grave with two ivory bracelets still on the bones of a fore-arm; no other bones. Two pots, both black-topped, one of brown, the other of red-surfaced pottery.

5127. Traces of matting round the sides of the grave, but body missing. One pot, SB21g, and another in fragments.

5128. Plundered body of male adult. Fragment of the butt of a carefully worked flint, pl. xxvii, 2, and scraps of an ivory bracelet, pl. xxiii, 16.

5129. Oval grave with matting round the sides. One pot only, BB8e.

5130. One pot, PR27h, a couple of beads in red jasper and black and white speckled pebble, and two *Oliva* shells. Ivory comb with two projections at the top, pl. xxiv, 18; and an ivory spoon, the handle ending in an ibex, pl. xxii, 3, and the bowl roughly rectangular, as pl. xxii, 6.

5131. Some scraps of ivory from a small vase, pl. xxiii, 2, and a bracelet, pl. xxiii, 13, were all that was found.

5132. Part of the jaw was all that was left of the body. With it were a few beads of carnelian and blue glazed steatite, a rough flint nodule with a natural hole, one *Ancillaria* and one *Natica* shell.

5133. Fragments of two pots, some scraps of ivory, three white steatite cylinder beads, and a *Natica* shell.

5134. An oval grave containing the undisturbed body of a young child wrapped in skins, and covered with matting. The thighs were at right angles to the spine, feet close to pelvis, and the hands before the face. Head south-east, face west. The saw-edged flint pl. xxvii, 2, lay close to the knees. On the ankles were two *Nerita* shells, and close to the head the pot BR7m.

19. 5136. One pot, and a scrap of bone with a criss-cross incised pattern, probably part of a little cylindrical vase (pl. xxvii, 2).

5137. Grave lined with matting, and containing the scattered bones of an adult male.

5138. Another plundered grave, oval, lined with matting. Remains of an adult female body, which had lain head to south-east; there were traces of cloth on the body.

5140. Legs remained, probably in position, at the north end. Two pots close to the feet. A few beads of blue glazed steatite from the filling.

5141. Matting along sides of grave, and one pot. Body plundered.

5142. No body left; matting at the sides of the grave, and one pot.

5143. There were faint traces of matting on the walls of the grave, but the bones had been removed. From the filling came the remains of the two objects of ivory shown in pls. xxiv, 6, xxvii, 2. The lower ends are very slightly hollowed. The upper part is decorated with a deep spiral groove. The upper end is not definite, and we cannot say for certain if any part of these staves is missing, but they probably ended as drawn. With them were a plain ivory bracelet, pl. xxiii, 17; an ear(?) stud, pl. xxiv, 12, of fine clay; a flint flake; and two *Nerita* shells.

5144. Trace of matting on the sides of the grave, but no body; a few potsherds and one ivory barrel bead.

5145. Oval grave, containing an undisturbed burial of a child, about six years old. There was linen on the body, and matting above and below it. The position was the usual semi-contracted one, head to south. Two pots, RB19f, probably inverted as a covering to BB77e.

5146. Plundered burial with matting at the sides. One pot, a small BR24e.

5147. Legs only remaining in position, covered with matting. The polished red bowl 9j was at the knees; BR15e was in the south-west corner.

5148. A few human bones mixed with those of a large ruminant, and fragments of hide with black hair. One alabaster bead, a flint arrow-head pl. xxix, 6, and a flint flake.

5149. Plundered body with remains of matting over it, and one pot.

20. 5150. An almost circular grave with the scattered bones of an adult male. Scraps of ivory from a bracelet (?) and from a cylindrical cup (?).

5151. Matting along the sides of the grave, which contained a few bones of an adult female, who had been laid head south. She had five ivory bracelets, pl. xxiii, 12, 15, 16, 18, 22, and an ear(?) -stud of fine black clay, pl. xxiv, 9.

5152. Plundered body, head south. With it were a slate palette, pl. xxi, 13, and pebble; a small ivory bangle, pl. xxiii, 23; and a breccia spindle-whorl. These are photographed together in pl. xxvi. Some fragments of ivory seemed to come from two spoons, one small and one larger.

5155. Rifled grave with bones of an adult male. Two pots, a few blue glazed steatite beads, a small pointed implement of bone, and an ear(?) -stud of fine black clay, pl. xxiv, 10.

5156. Oval grave with an undisturbed child about eight years old, head south, but hands down, not before face. No pottery. Grave plan, pl. ix, 26.

5162. Body of an adult male, wrapped in matting, and untouched. No pottery.

5163. This circular grave was 19 ins. under the preceding one. It contained a plundered female body, showing that the robbing of these graves began soon after the actual interments. Scraps of malachite, a few beads of shell and slate (?), and one *Ancillaria* shell.

5164. Oval grave lined with matting and containing the robbed body of an immature male (?). A bead or two of jasper, agate, and white steatite, a few *Ancillaria* shells, fragments of a little cylindrical vase of ivory, pl. xxiii, 7, an ivory hook (broken), pl. xxiv, 17, and a black flint pebble (burnisher?). No pottery.

5165. Grave apparently lined with matting. Disturbed male, with fragments of one pot, BR24k.

21. Cemetery 5200 was in ground to the north of the spur on which Cemetery 5100, 5700, 5800, was situated. The site had been much re-used in later ages, and it was almost impossible to say in some cases whether the objects found came from village rubbish or from graves. The presence of ash and organic remains suggested a settlement in certain areas, but meals seem to have been actually cooked in cemeteries, to judge from the cooking-pots found standing between graves apparently *in situ*, with ash round them. Two of these were found upright together, their tops 12 ins. below the surface (types RB33h, 36e); they contained fragments of animal bones, charcoal, and decayed vegetable matter. Another pair, of type RB31e, stood together, only 5 ins. under ground; the large pot RB27k was

standing inverted at so small a depth that its base had been denuded away. Other pots found singly were BB61k, 71k; MS3, 8; and RB7h, 11h, 27ekt, 31h, 33m, and 41f. There were also very many *Spatha* shells; a clay ear(?) -stud; a pierced disk of pottery; bone awls; a fish spine; flint flakes; and a winged arrow-head of very dark flint.

5206. A group of nineteen very rough flints found together, 11 ins. down, in a deposit of charcoal and ashes. Above them was organic refuse, including a goat's (?) horn, the dung of some small animal, and black goat's (?) hair.

5213. Another group of flints, etc., lying 25 ins. under the surface. Above them were four fairly well defined strata, 5 ins. of sand gravel, 3 ins. of ash, 3 ins. of animal or vegetable debris, and, on top of all, 14 ins. of gravel and sand. The flints were twenty-two in number, and lay in a hole 16 ins. in diameter. All are of the roughest work; eleven are photographed in pl. xxix, 1. Close to this group on the original *gebel* surface were a fish(?) -hook of shell, also in the photograph and drawn pl. xxiv, 16, two fragments of black-topped brown rippled pottery, the polished shaft of a bone, and a vertebra of a small animal.

5222. Oval grave of an untouched adult female, head north, legs more contracted than usual, with one pot in front of them. The body was covered with skins.

5223. Disturbed male, head south, with one pot.

5224. Almost circular grave with matting at the sides. No body, but two pots.

5225. Very old female covered with matting, head south, rather more contracted than usual. A pot, BB31e, close to the head, and a slate palette, pl. xxi, 19, in front of the face.

5227. An oval grave, 40 ins. deep; the body had quite disappeared, and no matting could be detected. In the filling were the remains of three pots, two drawn, BB61k, RB16m, and one of very thin ware in fragments. There were also the female figure of pottery painted red, pl. xxiv, 1, xxv, 6, 7. The rubbish in the grave, and that round it for a considerable area, was sifted thoroughly, but no trace of the head could be found.

5290. Small circular grave with the body of a child about ten years old, head north. Three pots, all of black-topped brown ware, one, BB14m, from near the feet, the others rather higher than the body, in the filling.

5294. Untouched body of a woman, covered with

matting, closely contracted, head north, lying on right side. One pot of black-topped brown ware.

22. *Cemetery 5300-5400.* Here lay the majority of Badarian graves that we found. Near the tip of the spur were apparently village remains; the cemetery began some distance away to the east. The ground was not much disturbed by later graves, but the Badarian burials, though seldom plundered, were unhappily very poor in character. Hardly any grave contained more than two pots, if indeed that. The better graves, generally robbed, were situated on higher ground half-way up the spur. To the east of them was a patch of quite barren ground, followed by a small cemetery of the "Pan-grave" people, close under the cliffs.

5317. Male wrapped in hides with the hair inside next to the body. Head south, not disturbed. One pot at the east side, behind the back. This was a rough bowl, like R3f in the new Predynastic types, pl. xli.

5342. Rough hole 19 ins. deep, but denuded. Male body semi-contracted with hands at knees, head south; wrapped in skins with the hair outward. Hair of man short and wavy. A pot over the head, and both pot and body covered by a layer of matting. Intact. Grave plan, pl. ix, 14.

5348. Oval grave. Adult male laid on matting, and also covered with it. One pot in front of face. Not disturbed.

5349. Undisturbed male in oval grave. The body, which was contracted, head south, lay on, and was covered with, matting. At the feet were the sherds of a rough pot, perhaps RB31r. Parts of a finer black-topped brown polished bowl came from the filling. Grave plan, pl. ix, 7.

5350. Burial similar to the preceding, but the individual was immature. Pot in position before the face.

5351. Similar burial, male. Pot at hands before face, like SB5h, and a bone awl.

5352. Oval grave, undisturbed, containing a male body, contracted, head south, with very dark hair, slightly wavy. The wrappings were of skins, with the hair outside, and matting over all. No pottery.

5353. Oval grave of a tall muscular male, wrapped in skins and matting. One pot before face. Undisturbed.

5354. Immature body with one pot 18 ins. above the hands. Much matting.

23. 5355. Another immature body with one pot over the hands.

5356. Adult male wrapped in matting with one pot over the hands.

5357. Small hole, 22 ins. deep, containing the body of an infant, head south. One pot above the covering matting.

5358. Adult male with short dark wavy hair, lying semi-contracted, head north. The wrappings were of skins, with matting over all. One bone awl, but no pottery.

5359. Another male with head to north, wrapped in skins and matting. The hair was dark brown, short, and wavy. Sticking in the skin of the wing of the right nostril was a little stud of pale green stone, pls. xxiv, 13, xxvii, 5. No pottery; undisturbed.

5360. A very old male, wrapped in skins and matting, with head to east; tightly contracted. No pottery.

5361. Young male (?) about seventeen years old, head north, with brown wavy hair. He was wrapped in matting and in skins which were tanned and without hair. No pottery. Grave plan, pl. ix, 11.

5362. Adult male, head south, hair dark and wavy, nose prominent. At the hands, one pot covered by a lid of basketwork fitting under the rim.

5363. Child's body, with one pot before the face, but 6 ins. higher.

5364. Immature body, head south, wrapped in matting. A short string of shell ring beads with two turquoise (?) cylinders at the neck. Apparently round the waist were a number of pierced shells of the six different varieties detailed in the Grave Register.

24. 5365. Burial of an infant with one pot, RB39k, over the head, and the saucer AB1 before the face.

5366. Adult male, head south, lying on the right side; hair grey and wavy.

5367. Adult male, left hand down, with a rough pot at elbow. Grave plan, pl. ix, 25.

5369. Body of a man with short black wavy hair. Rough brown bowl close to hands, but 12 ins. up.

5371. Circular grave with a child of about four years old, wrapped in matting, head west. With it was a curious deposit consisting of a calf's (?) rib, knuckle bone, leg bone, and scrap of jaw; a number of odd potsherds; a stone rubber and eight small stones all showing traces of burning; and five pieces

of what looked like dung fuel. The remains of a little fire for roasting meat was suggested.

5372. Usual oval grave, with one pot and traces of matting near it, but no sign of a body.

5373. Circular grave of a man wrapped in skins and matting. Prominent nose, sloping ramus to jaw, and light brown wavy hair. One bowl at hands before face.

5374. Adult male, nose not prominent, wide ramus to jaw, wrapped in rush (?) matting and skins. At the hands was a bunch of decayed woven material. Over the hands was a large saucer and a cup which had been wrapped in cloth. With the body were a flint pebble with natural hole, a piece of branched coral pierced, some scraps of resin (a pendant?), and four *Conus* shells.

5375. Adult male, head north, with a quantity of curly black hair, wrapped in skins and matting. See photograph, pl. x, 2.

5376. Young male (?), head south, with wavy black hair. See photograph, pl. x, 2, 4.

5377. Old man, head east, wrapped in skins from which the hair had been removed. Man's hair wavy and black. See photograph, pl. x, 4. With none of these last three bodies was there any object whatever.

5378. Adult male, head south, wrapped in skins and matting. Hair black and wavy. Hands before face; bowl of fine brown pottery at the knees.

5380. Young male (?), head south-east, with brown wavy hair.

5381. Child of three years; saucer before face.

5383. Old man with grey wavy hair. At the hands, a pot, BR34m, pl. xx, 6, covered with coarse sherds.

5384. Another old man, on his right side, with hair wavy and grey. Grave plan, pl. ix, 24.

25. 5385. Old male, wrapped in skins and matting; brown hair, only very slightly wavy.

5386. Old male with wavy grey hair; pot at hands, slightly oval, BB64m, pl. xx, 7.

5387. Man with long, straight greyish hair. At the hands two flints, one a chipped nodule, the other a small rough adze.

5388. Circular grave of a man, knees sharply bent, but body not contracted. Wavy grey hair. In front of the arms, a black-topped brown polished pot, BB19m, faintly rippled all over.

5389. A rifled grave. In it were one pot, like BB19c, and two flints: a flake, and the point of a rough saw-edged knife, pl. xxviii, 3.

5390. Circular grave probably of a woman, with plentiful rather long, wavy brown hair. This was the first female burial found in this cemetery. The wrappings were the usual skins and matting. Behind the head was the one pot. At the wrists were four beads of alabaster and ivory, and one *Nerita* shell. Close to the hands lay two ivory vases, pl. xxiii, 6, 8; two bone combs, pl. xxiv, 4; a bone needle, pl. xxiii, 28; a solid piece of hippopotamus tusk, $4 \times 2 \times 2$ ins.; four small flint flakes, pl. xxvii, 1; and a dark red pebble. See photograph, pl. xxvii, 1.

Ten inches above this grave was a later burial of a female, loosely contracted, head to south-east; but there was no evidence of date except an absence of the usual Badarian matting.

5392. Adult, probably female; pot at hands.

5393. Plundered grave. Male pelvis. Short string of roughly-cut carnelian beads, with one of yellow soapstone.

5394. Adult female with wavy black hair, head south, on right side. No sign of matting.

26. 5396. Woman with long black wavy hair and bowl at hands.

5397. Roughly rectangular grave, robbed. The two pots were at the south end; the beads and ivory pin came from the sifting.

5398. Robbed grave. One pot at north end, PR9h, pl. xx, 10.

5399. Plundered grave of woman with grey plaits. Two pots and a long slate palette, pl. xxi, 8, at the south end. One ivory bead.

5401. Circular grave of adult male wrapped in skins and matting; disturbed. Under the bones were seven flint cores and flakes, pl. xxviii, 3.

5403. Grave badly plundered and body gone. In addition to the matting there had been sticks in the grave (to support matting against the sides, or from a brushwood roof). Remains of three pots (drawn), and fragments of one other of dark brown ware. Several large and small stone beads, a pierced flint pebble, and the pierced spire of a shell. Other objects were a broken slate palette, pl. xxi, 17; a grinding pebble of green jasper; a scrap of *Spatha* shell; piece of a wide ivory bracelet, inlaid with beads, once probably blue glazed, pl. xxiii, 14; ten or more small flint flakes; and a piece of mineralised bone (?). For the principal objects, see the photograph, pl. xxvii, 3.

5405. Almost circular grave, 40 ins. deep, of a woman with curly grey hair, wrapped in matting and skins, head north. Pot before face, BR24h,

with a second pot of coarse ware, RB27k, only 12 ins. under the surface.

5406. Plundered grave without a body. Large coarse cooking-pot, in the filling, like RB27t; also the keeled bowl in smooth brown ware like SB9k. All that remained of the ornaments were four ring beads of shell, some *Oliva* and *Conus* shells, and scraps of a knobbed bracelet of ivory, like pl. xxiii, 18. There was also a scrap of wood 3 ins. long, $\frac{1}{2}$ in. square in section, a flint arrow-head, and some flakes. Photograph, pl. xxix, 5.

5409. Legs and pelvis only left, probably male. At the ankles were three beads in alabaster and steatite, and a little gazelle or ibex head carved in bone, pl. xxiv, 14. A curved bone needle was also recovered. Photograph of the group, pl. xxvii, 1.

5411. Plundered grave of an adult female with long, wavy brown hair, arranged in twisted tresses. In the south-west corner was the pot BR16p, pl. xx, 8. There were also some *Oliva* and *Nerita* shells.

5412. Undisturbed female (?), head north, with thick dark brown wavy hair, about 6 ins. long. At the hands, one black-topped pot, BB57e, without any polish or slip.

5413. Grave of an infant, head south, wrapped in matting, and quite untouched. At the hands was a pot of type BB31h, plain brown and not very thin. Round the neck, still on the original string, were a few beads of blue glazed steatite or turquoise, with two carnelian, one shell, and two copper. These last are of metal ribbon, wound round spirally to form rings (pl. 1, 86w₃).

5414. An old female (?) wrapped in skins and matting, with straight black hair going grey, head north. In the south-west corner, behind the pelvis, was the pot RB39h with a lid of basketwork. Grave plan, pl. ix, 18.

27. 5417. Plundered grave of a female. Two pebbles and an oblong piece of breccia with a slight hollow at one end.

5418. Body of a woman, head south, but disturbed. One *Conus* shell on a piece of the original fibre, and a string of small green glazed steatite or turquoise cylinder beads. Under the feet, a rough lump of quartzite sandstone.

5419. Circular grave of adult male (?), head and shoulders disturbed. *Spatha* shell; and at south end, sherds of a pot SB44m. Just under the surface, a large rough cooking-pot, RB31p.

5421. The dimensions were those of a grave, but the cutting was much rougher and more

irregular than usual. No trace of matting, and only a few scraps of bones high up in the filling. Almost at the bottom of the pit was the Predynastic pot R69c (S.D. 36-68).

5422. Burial of a large bovine animal, covered with matting in exactly the same way as the human burials. This animal had been disturbed, and there was no skull remaining; it had been to the south and the spine lay along the east side.

5423. Another animal burial (sheep or goat?), much disturbed. There was the usual matting, and also traces of cloth.

5424. Similar bones to those in 5423, no head, and spine only remaining in position.

5426. Adult male, wrapped in skins and matting, disturbed. The one pot, AB1, lay in front of the face, the other, BB8h, was behind the head. The latter was of thin black-topped ware, but had no slip or polish.

5427. Woman with prominent nose and sloping ramus. One pot at hands, before face.

5428. Body gone. Matting and sticks as in 5403. Fragments of a deep round BR rippled bowl. Two beads of agate and green limestone (?), and a shell (*Purpura*). Scrap of a slate palette with deep notch, 1 $\frac{3}{4}$ ins. wide; *Spatha* shell; piece of an ivory bracelet (?); and seven flint flakes.

5434. Another animal burial like 5422, but not disturbed. The skull was unhappily too broken and fragile to move, though we were able to bring home the jaws. Part of one large horn-core only. Traces of very short dark brown hair. The burial is photographed in pl. x, 6. It will be noticed that the horn-core points downwards. Professor D. M. S. Watson has examined the photographs and the jaws, but the material is insufficient to identify the species of *Bos*. Possibly it is this animal which is represented on the cross-lined bowl, pl. xxxviii, C49k, with its downward-pointing horns.

28. 5436. All four pots were high above the grave in the filling at a depth of 12 ins. The four flint flakes were at the bottom of the grave.

5437. Nearly circular grave. Body gone. One pot, MS17, which seems hardly to be Badarian; many coarse sherds; a number of flint flakes; and a hippopotamus tusk.

5438. Disturbed female with a quantity of brown wavy hair and a horn finger-ring.

5440. Small shallow grave of a man, head south-east, with curly brown hair 4 or 5 ins. long.

5441. Small shallow grave of a woman about

twenty-five years old, wrapped in matting, with cloth under arms and head. Hair dark and almost straight. Head south-east. Grave plan, pl. ix, 16.

5444. Plundered grave. Sherds of BB71h, and possibly of another similar, but in thicker pottery. Piece of red polished bowl with paler radial(?) stripes on the inside surface, MS15. One *Terebra* shell. Worn slate palette, pl. xxi, 15, pebble, and *Spatha* shell. Scraps of an ivory bowl, pl. xxiii, 1, and a bone piercer.

5445. Woman wrapped in matting, with pot at hands.

5447. A young man about twenty years old, wrapped in skins, and with a quantity of matting. He had much brown wavy hair, and seemed particularly tall: the femur measured 19 ins. and the tibia 15 ins. One humerus only was left, the rest of the arms had been removed. Sherds of one pot, BB12d.

5451. Group of objects, mostly rough flints, found 6 ins. under the surface on the south edge of an empty grave. The photograph, pl. xxix, 2, shows the character of the flints, which were mostly of the roughest kind, apparently waste. With them were part of a small black pottery cup, thick and rough; and a well-made saw-edged flint knife (in the photograph); a partly re-chipped celt of brown flint (in the photograph); a scrap of animal bone; and a chisel-like bone implement. Opposite to this last in the photograph is a similar tool found loose.

5453. Plundered grave with parts of three pots, part of a slate palette, and scraps of ivory from a bowl, bracelets, and finger-ring.

5454. No grave. Two cooking-pots standing together on the old ground-level and containing scraps of charcoal.

29. 5455. No grave. One cooking-pot standing in position.

5457. Almost rectangular grave with matting, but body plundered. Fragments of an ivory spoon, and many sherds of fine polished red, black with wavy rippled surface, and hard unpolished brown ware. One vessel of black-topped brown-surfaced ware had the more or less flat base almost peculiar to this class of pottery (pl. xii).

5459. At 29 ins. down, on the edge of a small rough hole (grave?) containing some rough Badarian sherds, was a group of five bowls inverted in a heap, with traces of basketwork underneath. The types are BB12f, 14m, 37e, 52m, and 69p. The last is

photographed in pl. xx, 3. Close by was part of a well-worked flint adze, pl. xxviii, 3.

5470. This was a grave in the "Pan" cemetery which was quite separate from the Badarian burial-ground, though on the same spur. It was badly plundered, but contained a few characteristic blue glaze beads of the "Pan-grave" people, and one *Nerita* shell. In the filling was found the Badarian flint arrow-head (pl. xxix, 5); this may have been picked up in the district, and buried as a charm in the later period.

30. Cemetery 5600. A few Badarian, Ptolemaic, and Roman graves. The Badarian graves contained next to nothing, and were mostly robbed. Bodies contracted, heads either north or south. One tiny infant had a pot, RB39h. A few large cooking-pots were found standing on the old *gebel* surface; RB43h, containing quantities of grain husks, and RB33k, with thick brown slip, but black inside, also containing remains of grain. Two other pots were BB77p and PR49f. Flint flakes and cores were also found, pl. xxviii, 4.

Cemetery 5700-5800. Cemetery 5700 lay to the west of Cemetery 5100, but was not actually continuous with it, as a small patch of ground between the two groups of graves was quite barren. The spur was mainly occupied by the modern Coptic grave-yard, and we could only work the two unoccupied strips along its north and south edges. The northern strip was called Cemetery 5800. The ground was considerably denuded, some of the graves being only 20 ins. under the surface.

In Area 5700 we found remains of the usual cooking-pots standing on *gebel*, and a small clay bin, just north of grave 5701, and almost in it. A rough brown bowl, RB33e, was also upright on *gebel*. Other pots are BB49f, PR25e, SB44h, and RB27h. Smaller objects are half a large black mud bead (?), pl. xxiii, 32; three beads of calcite, ivory, and carnelian (86t₂, 86p₆, 86m₁₄); a string of *Oliva* shells, with a few ring beads in serpentine and blue glazed steatite; *Nerita* and *Ancillaria* shells; a shell pendant like 89d₆ but smaller; and a nail-shaped pottery ear(?) -stud, pl. xxvii, 5. There were also the usual bone awls or borers; half a pierced disk of black pottery, 1½ ins. in diameter; two shells, *Mutela* and *Spatha*; and half a perforated horn, pl. xxvii, 5. The flint flakes and a fine saw-edged knife are shown in pl. xxviii, 2. One collection of flakes was of white and brown smoky quartz.

About fifteen bodies examined were wrapped in the usual matting, but the graves contained no objects whatever.

Area 5800 was cut by a shallow *wadi* running west, probably eroded since the burials, as some of them were barely covered. Many graves contained no objects; there was an equal proportion of heads south and north. The bodies were generally loosely contracted, and there was no segregation of males and females. Graves not registered were as follows, all containing matting, except one:

Man, tightly contracted, head south, wrapped in skins.

Women, head north (two graves).

Woman, on right side, head east.

Woman, on right side, head south, wrapped in skins.

Child of eight years, head south, tightly contracted, wrapped in skins.

Infant, head north.

Infant, head south-east, wrapped in skins, no matting.

Two pots were found loose, MS12 and BB14p; also one badly decayed bowl in black-topped brown polished pottery.

31. 5701. Remains of reeds and sticks (1 in. thick) along the sides forming a distinct rectangle, 38×44 ins., rather smaller than the grave (40×55 ins.), apparently a sort of hamper, but perhaps only a support for the rather loose gravel at the sides. Immature female (?) body, head south on right side, not disturbed. Hair dark brown and rather curly. One pot, BR24p (pl. xx, 4), before the face, and sherds of another. From the region of the waist, a number of *Oliva* shells. Grave plan, pl. ix, 13.

5702. Undisturbed and tightly contracted male, wrapped first in skins with the hair remaining, and then in reed matting. Head south-east.

5703. Undisturbed male, contracted, head west, lying on right side, wrapped in matting. Remains of a black-topped red polished pot behind the head, outside the matting.

5705. Man in matting, head north on right side, in the usual loosely folded position. Very much broken BR34e close to the head. At the neck, a large barrel bead of alabaster; on the right wrist, a plain ivory bangle. Round the waist, masses of green glazed steatite cylinder beads, still of a good colour. Behind the pelvis, perhaps in a box or bag, was a collection of objects comprising many flint

flakes, a saw-edged flint knife, a natural pebble, a little lump of red ochre, *Cymathium* and *Nerita* shells, two coarse bone needles (eyes broken), a fine bone needle, and a bone piercer. These are shown together with the beads in the photograph, pl. xxvii, 4.

5708. Infant about two years old, head to south-east. At the neck, four odd beads and four *Nerita* shells.

5709. Circular grave of an old person, loosely contracted, wrapped in matting. Behind the head three pots, RB14e, and RB25h inverted over BR34p, which last contained some organic substance, probably bread. Not disturbed.

32. 5710. Child of about ten years, head south, in a rush coffin, 18×22 ins., undisturbed. One pot, BB74f, at the south end of the grave. A long string of shell, one carnelian, and a short string of blue-glazed steatite, ring beads, running from the neck to the wrists. At the hands was the small slate palette pl. xxi, 16, and close to it before the face lay a small ivory spoon with a round bowl. Grave plan, pl. ix, 20.

5711. Circular grave, partly cut into by a Roman burial, disturbing the pelvis and lower part of the spine. The usual matting was present, and under it, about the head, were signs of cloth. A pad of cloth was also at the hands (before the face). At the neck was a string of blue glazed steatite and a few shell beads, threaded with *Ancillaria* shells; while on the right arm was a large pendant of black and white mottled limestone. On the western edge of the grave was a pot, BR43f.

5712. Undisturbed old man wrapped in skins and matting, head to the north. Pot RB9h was between the hands and the knees; pot BR15p behind the back. At the wrists were a few shells (*Ancillaria*). Grave plan, pl. ix, 6.

5713. An old person, probably male, head south-east, with pot RB16e inverted over BR24m.

5716. Undisturbed adult male in an almost rectangular grave, without pottery. With the burial was a quantity of wood and matting. As far as could be seen, the body lay on a tray of matting stiffened with sticks placed cross-wise. The ends of the sticks were lashed to stouter poles running north and south. There were sticks and matting above the bones as well, and probably we had here the remains of a kind of hamper coffin. The measurements were, roughly, 33×47 ins. The loosely contracted body was wrapped in skins, and

at the head was woven material. In front of the hands was a lump of bread (?), and two flat wooden throw-sticks or castanets, lying one on the other. These are ornamented with a slightly incised pattern. The end of one is missing, and was not in the grave; pl. xxiii, 29, and photograph, pl. xxv, 1, 2.

5718. Nearly circular grave of a woman, head south-west, the left hand before the face, the right near the waist. Cloth at the head, under the matting. Two pots, one very fragmentary, the other RB11t. Round the neck and perhaps at the wrist were a number of beads of blue glazed steatite, shell, and black and brown soapstone (?), with a few of grey limestone, calcite, and one carnelian. Also one *Ancillaria* shell. Grave plan, pl. ix, 23.

5719. Untouched child, about five years old, wrapped in matting. Near the head, a small pot of fine black ware reduced to a mass of flakes, and covered with a basket. Close to it was an alabaster rubber (?). Before the face were a spoon or dipper, with long rectangular bowl, found in two pieces; two long pointed rods of wood; an ivory bracelet; and some powdery green copper or possibly malachite. In the south-west corner of the grave lay a large flint core, a bone tool, part of a hippopotamus tusk, a piece of quartzite (rubber?), and a flat piece of grey schistose stone. Grave plan, pl. ix, 12.

33. 5720. Legs cut away by Roman burial. Cloth on the head, under the matting. On top of the skull was a small basket lid, and the cloth underneath was stained bright green. In front of the elbows was a tiny basket with no other objects, while on the north edge of the grave lay a rectangular slate palette with its pebble grinder.

5721. Adult male (?), undisturbed, wrapped in skins and matting. A large number of green glazed steatite cylinder beads were mostly at the waist or half-way up the spine, with one or two near the head.

5722. Child of ten years with a necklace of black soapstone (?) and white shell ring beads, one or two blue glazed steatite, several *Ancillaria* shells, and a few very small *Conus*. The black and white beads were threaded in groups of four or five white between three black.

5723. Untouched woman with straight black hair a few inches long, wrapped in matting and skins, with the hair next to the body. At the hands, one pot of type PR6e, poorly made in unpolished brown ware, inverted over SB24m.

5724. A very old individual with pale greenish

hair 2 ins. long and wavy. One pot near the hands outside the matting.

5726. Unplundered elderly woman with long, wavy black hair. One pot, at hands.

5727. Male, head north, hands near knees, short hair gone green. Pot RB11h, covered with sherds, behind back. Grave plan, pl. ix, 15.

5728. Circular grave of a man lying head west, loosely contracted but hands down. Wrappings of matting and skins with the hair inside. One pot before the face. A rough crystal of calcite was also found. Grave plan, pl. ix, 17.

5729. Woman, head north on right side, wrapped in matting, and surrounded by a kind of hamper of sticks, measuring 32 × 40 ins. She had straight black hair; and behind the head was the pot BR21e, rippled but not polished. Alongside lay two pointed sticks, 2·7 ins. long, with a slight swelling out towards the pointed end.

34. 5730. Old female (?), with pot at hands.

5733. Small child, head south-east, with a badly decayed bowl of smooth brown pottery. Round the head was a circlet composed of a double row of *Nerita* shells, round side out. At the hips was a string of *Oliva* and *Natica* shells; and a necklace of shell beads, with a few green glazed steatite, was also worn. Untouched. Grave plan, pl. ix, 3.

5734. Woman, head to south-east, wrapped in matting and finely tanned skin with the hair inside. No pottery; the only object was a bone awl or piercer, behind the back.

5735. Undisturbed man in grave containing much matting and sticks up the sides. Head south, straight black hair. There were traces of cloth at the hips, and round the body was a pelt with fine black fur like a cat's. This appeared to have been worn sideways round the back and hips, something like a priest's leopard-skin in historic times. On the right arm above the elbow, a few *Nerita* and *Clanculus* shells. At the left wrist, attached to a twisted thong bracelet, a large green stone pendant. Round the waist over the fur was a mass of green glazed steatite beads, forming a long string wound round and round the body, not a made belt. Photograph, pl. xxvii, 3.

5736. Two Roman burials had disturbed this grave. Three pots remained, one, RB11h, covered with a basket lid.

5737. Circular grave of an infant, with one pot and a necklace of four cylinder beads of red limestone (?) with two *Conus* shells.

5738. Probably female, head south, tightly contracted. The pot, which contained bread (?), was behind the head. *Natica* shells and three pebble beads at the ankles; at the wrists, beads of white glazed steatite (?) and turquoise (?), with a few *Dentalium* shells. In the hand was a small slate palette shown in the photograph, pl. xxvii, 1; and before the face was a little clumsy ivory vase, and a bone hook. A small flint flake is shown with these in the group, pl. xxvii, 1.

5739. Male, wrapped in matting and skins, tightly contracted. Over the knees, perhaps in a leather bag, were a group of objects mostly shown in the photograph, pl. xx, 16. These comprise two bone piercers and a bone needle; a rectangular slate palette (one side slightly rounded), with a green pebble rubber; one pierced pebble, and one *Natica* shell; three stone rubbers (?), two of which are shown; various pebbles and flint flakes (one shown); a piece of red ochre; and two flint knives, one saw-edged, pl. xx, 16.

35. 5740. Six-year-old child in almost circular grave, disturbed. With it were the little bone hippopotamus head pl. xxiv, 15, a pierced *Nerita* shell, and a number of beads in turquoise (?) (86m₁₆, p₁₂, r₁₄), steatite (varying from 86m₂₂ to p₈), shell (86l₁₂ and m₂₂-p₈), ivory (75a₁₂, a₁₈, and c₃, 89f₃), and *Dentalium* shell-tubes. These are not all entered on the Register or in the Bead Corpus.

5741. Very old individual. One pot, and at the neck a broken pendant in banded igneous rock. One *Nerita* shell.

5742. Infant with bowl at feet.

5744. Almost circular grave, cut into on the south by a Roman burial, which had removed the head, but had not apparently otherwise disturbed it. The body, however, was, most unusually, in a prone position and almost extended, the knees being only slightly flexed. The left forearm was bent under the chest, and the right hand was at the shoulder. Traces of cloth were in contact with the body, and a skin above that, but on the upper part only. The usual matting was also present. No pottery remained except some sherds in the filling. Close to the left femur was a group of objects shown in the photograph, pl. xxvii, 5. These were two slate palettes (pl. xxi, 6, 7), two winged arrow-heads, one being embedded in some substance, two pebbles, one flat and one pierced, a flint core (since lost), a few flint flakes, one having "dos rabattu," two small polished pebbles (for the slates?),

and a limestone pendant 2.7 ins. long. Grave plan, pl. ix, 28.

5745. Elderly woman, head south, teeth much worn down, but hair thick, black, and wavy. One pot, close to the head. In front of the face, an ivory spoon pl. xxii, 2, bone needle pl. xxiii, 26, and a broken slate palette pl. xxi, 2. On the right wrist, a bracelet of horn (?). Grave plan, pl. ix, 10.

5746. Circular grave of an old man, head west. Cusps of teeth much worn down; hair wavy and black, apparently about 3 ins. long. Remains of a pot in rough brown ware.

5747. Old male, teeth much worn but sound. Broken bone needle, with unfinished eye above the finished one.

5749. Old male, with pot at hands. The goat(?) skin wrapped the body but not the head.

36. 5750. Male, head south-east. One pot, BR24m, at the head; a second, BB3rt, behind the back. Grave plan, pl. ix, 8.

5751. No sign of matting. Man with good teeth, wrapped in goat(?) skin. The slate palette, pl. xxi, 5, lay in front of the face, with a pot, BR9m, on top of it, covered with basketry. One flint flake. Grave plan, pl. ix, 9.

5752. Male (?), supine, face east, with hands on chest and lower legs crossed. Teeth worn down almost to stumps. Cloth round the head, and matting over all. A bowl of rough black rippled pottery. Grave plan, pl. ix, 29.

5753. Male, without matting, wrapped in goat(?) skin, head north. One pot, BB5h, at hands, with fragments of a PR9 at knees. Grave plan, pl. ix, 5.

5754. Infant, with pot before face. Close by were three or four tips of ostrich feathers flattened out and arranged fan-wise.

5755. Grave completely disturbed by Roman burials. One pot, a *Conus* shell, and a group of five wooden tools: pointed sticks of varying lengths.

5757. No trace of skins or cloth. Pot at hands.

5758. Young man wrapped in two qualities of skins, probably goat-skin outside and gazelle inside. One pot at knees.

5762. Man wrapped in well-tanned skin with fine black short fur. Behind the head a pot of smooth black pottery, AB2, the edge only combed. Ivory bangle pl. xxiii, 19, bracelet of seven *Nerita* shells on right wrist, a bone finger-ring pl. xxiii, 24, and a bone point pl. xxiii, 25.

5763. Very small man, only about 5 ft. high,

hands cut away by Roman grave. Pot close to head, and *Natica* shells at neck.

5766. No matting or skins visible. The body was not disturbed as far as could be seen, but the head was missing, and the pot SB33h was in its place. A similar case is recorded (PETRIE and QUIBELL, *Naqada*, p. 28). Grave plan, pl. ix, 2.

5767. Man, lying on the right side, wrapped in skins, hair inside. High bridge to nose, bones very big and strong, height approximately 5 ft. 8 ins. Hair straight and black. No pottery.

5768. One pot, BB64h, at knees, covered with a large sherd, part of an RB36e.

5769. A young individual, head and feet cut off by Roman burials. Head north, on right side. Four pots in front of arms, SB46p, RB19t, and SB24p, in the last of which was the little pot SB24h (with threads of cloth inside it), and also the mud female figure pl. xxiv, 3. The cloth may have originally wrapped the doll; the wrappings, and the small pot placed with the doll in the bowl, suggest that a model burial was intended. Grave plan, pl. ix, 4.

37. 5770. Very prognathous female, with black rather curly hair. The pot seemed to have contained bread.

5772. Man wrapped in goat(?) - skin, with head upright; straight brown hair. Tightly contracted. Grave plan, pl. ix, 1.

5773. Deposit 10 ins. below the surface. Eighteen inches away to the west was an empty grave disturbed by two Roman burials. The photograph, pl. xxix, 4, shows this group of objects, which consisted of nine saw-edged flint knives, a flat piece of sandstone, and a long bone needle made from a rib. Under these were traces of leather (bag?), and grain husks were lying around.

5774. Male, undisturbed, except for the fact that the right (upper) femur was missing. There was the usual matting, but the skins seemed only to be on the legs. They may have been removed with the thigh. The two pots were above the matting, near the head.

5801. Woman, head north, with dark brown wavy hair, about 6 ins. long. Skins with the hair next to the body. One pot in fragments like BR24h, only the rim rippled. Over it was placed a large sherd.

5802. Upper part of body undisturbed, the rest cut away by a Roman burial. Woman, head north, with a pad of crumpled leather under the head.

5803. Untouched body in an almost rectangular grave, right forearm across chest, the left at side. Probably female, but pelvis crumbled. Curly brown hair about 4 ins. long; head upright, facing west. Matting in a square parcel. Scraps of leather showing a seam, and a piece of plaited thong. Grave plan, pl. ix, 22.

5804. Young female (?), hair short and straight, head north. Grave much denuded.

5805. Tall man, over 6 ft.; wrapped in skins and matting. Hair 3 ins. long, wavy and brown. One pot at elbow, plain black-topped red polished. Grave plan, pl. ix, 21.

5806. Man wrapped in skins and matting, with traces of cloth under the leather. Pad of leather (or folds in the wrappings), showing seam and plaited edge.

5807. Infant wrapped in skins, but not matting. Necklace of tubes from *Dentalium* shells, *Ancillaria* shells, and a few blue glazed steatite beads.

5808. Man with dark curly hair, skin well preserved. Laid on matting, and wrapped in leather showing the seams, with the fur inward. Tightly contracted.

5809. Child three years old, with pot at feet.

5812. Old man, teeth worn to stumps, wrapped in matting, and in skins without fur.

5814. A curious deposit, 8 ins. under the surface. Bottoms of two large cooking-pots with ashes inside. Between them, the collection of flints shown in the photograph, pl. xxviii, 5.

5815. Female, probably robbed. Matting, but no skins. Lying prone, head north-west, hands under face, femora straight, legs bent above body. Rather short, dark, slightly wavy hair. Teeth good, but worn.

5816. Man, with perfect teeth, very little worn. Usual wrappings, but in this case the skins had the hair on the outside. Pot at head.

5817. Woman, on right side, head north. Matting, but no skins. Disturbed by Roman burials across head and feet.

5818. Adult male, head to north-west. A bone point, and a *Spatha* shell filed down.

38. Cemetery 6000. The ground south of the great *wadi* was mainly occupied, at least in its upper part, by a badly plundered cemetery of the Protodynastic period. Along the *wadi* edge were a few Badarian graves of an apparently late type. The graves without objects are not registered. The

bodies were closely contracted, one head to north and two heads to south.

6002. Woman with straight hair, wrapped in matting; two pots before face.

6003. Man, with pot behind head. The pot had a lid of basketwork.

6005. A small oval plundered grave. No body, but a few *Nerita* shells. One pot, the Predynastic B77b, s.d. 34-56.

6006A. Possibly not a grave. The pot SB21m was inverted over BR16n, which had no knob.

6017. Deposit of large flint cores, and one implement (for flaking?).

6018. Man, with leather and matting wrappings, face downward. One alabaster bead at neck. No pots.

6021. This grave was an isolated one about 50 yds. south-west of our huts. Bones in a fragmentary state, but possibly male. One pot, BR16p, and the slate palette, pl. xxi, 9, with its pebble close to the head. Grave plan, pl. ix, 19.

CHAPTER IV

THE BADARIAN GRAVES AND BODIES

39. THE Badarian graves are all dug in soft, sandy gravel or limestone detritus, which could be easily dug out with primitive implements. There was no very definite shaping, a rough oval, or less frequently a rough circle, being the general form. One or two graves had more or less straight sides with rounded corners, but this was quite exceptional (5397, 5716, 5803). The sides are not vertical, but slope in varying degrees, so that the floor of the grave is rather smaller than the mouth. There was never any trace of a shelf or recess.

The graves of adults averaged 53 ins. long; but a considerable difference is shown in the size of the graves in the different patches of cemetery. In Area 5300-5400, 37 male graves averaged 45 in., 17 female 48 ins., and 19 unsexed 63 ins.; average, 51 ins. In Area 5700-5800, 28 male graves averaged 47 ins., 17 female 42 ins., and 9 unsexed 42 ins.; while just to the east the 56 graves of Cemetery 5100, mostly unsexed, averaged 65 ins. The graves which were not sexed were in most cases plundered, and we may therefore conclude that they were richer than the smaller untouched ones. All the large graves of Cemetery 5100 were robbed. In Area 5300-5400, the plundered graves are all to the

east on slightly higher ground; and this is also the case in the southern cemetery, where Area 5100 lies close under the cliffs, and Area 5700-5800 to the west and rather lower.

There seems to have been little difference in the size of the graves of males and females of the poorer class. In the northern cemetery the average lengths are 45 ins. and 48 ins., in the southern 47 ins. and 42 ins. respectively. It seems likely, however, that the larger of the plundered graves were for females. We found only 29 females untouched, compared with 63 males.

The depth of the graves varied as much as the length, and was more difficult to judge owing to denudation or deposition. Probably 36 to 40 ins. would be a fair average.

We found little evidence that the graves were roofed. Matting was occasionally seen against the sides of a grave, and also sticks, as if a kind of revetment had been intended. This indicates a desire to keep the body free from falling sand or gravel, and it follows that a roof of some kind would have been necessary as well. The more delicate pots in the graves were always crushed into fragments; the skulls were also rarely intact, and the indications pointed to a falling in, rather than to a deliberate filling up. The sticks seen sometimes against the sides of graves may have been roofing which had fallen in; and in one instance in Area 5800 Mr. Engelbach noticed a hole in the side of a grave with traces of wood dust in it. This seems to have been the socket of a roofing pole; but no other such holes were observed. See further remarks below, in connection with hamper coffins.

40. The bodies themselves must now be considered. The commonest attitude was a loose contraction, with the thighs forming an angle of about 60° with the spine. There was no uniformity in this respect, however, and the thighs were often at right angles, or even obtuse angles, to the spine. The tightly contracted position, knees to chin, was rare. The hands were almost always before the face or near the head; sometimes one hand might be close to it, and the other at a distance. Very rarely one or both hands were at the knees or even lower. The principal varieties of attitude are shown in pl. ix, and the photographs on pl. x give a good idea of some of the positions. It was noticeable how all the attitudes were those which might be adopted for a comfortable sleep; and this idea was enhanced by the position of the head, which was often raised

owing to its being laid on the sloping side of the grave. There were no attitudes which could be called other than perfectly natural.

The direction of the head was generally to the south. A few lay head to north, and a very small proportion in other directions. Of all the 148 burials, whether sexed, children, or doubtful, where the direction could be noted, 84 per cent. were head to south and 16 per cent. head to north. Out of 70 males, 86 per cent. lay head to south and 14 per cent. to north. Of the 43 females, 74 per cent. head to south and 26 per cent. to north. There was therefore no marked distinction between the sexes. Of the children, 19 were head south and 2 head north.

A small proportion of the bodies lay on their right sides; in the Register the direction of the head in these cases is underlined. Of bodies lying head south (as usual in the prehistoric periods), only 7 were on their right side, while of the 23 head north, 14 were so laid. It may be stated, then, with some certainty that there was a distinct desire for the deceased to look to the west in whatever direction the body might be laid. This is like the Late Palaeolithic burials at Ofnet, which all faced the sunset. In eight instances the head was placed to east or west.

41. There was no sign that the bodies had been preserved in any way. The skin was sometimes still visible, occasionally well preserved, but the internal organs had always disappeared. On the whole, we may perhaps say that the condition of the bodies was less good than that of the Predynastic people, but the difference may only be due to accident.

There was no evidence that dismemberment was ever practised. The only case which is noteworthy in this connection is that of an aged female (5766), without matting or any objects whatever, who, though otherwise undisturbed, was headless, and had a pot in the place where her head should have been.

In sixteen burials, woven material was noticed next to the skin, under the wrappings. This was in general the merest trace, very difficult to detect; in all probability it had existed in other graves and escaped observation. It was not confined to the better-class interments, but was found alike in large and small graves. In seven cases, the head, and probably only the head, was wrapped in cloth (three females, one child, and one male). In one instance, a male, it could only be traced at the hips, suggesting a kilt. In another, also a male, there was a pad of

cloth at the hands. In six of the other graves in which it was noticed, there was no definite area, and the body in general was probably shrouded (two female, two children, and two males). The little female figure in 5769 may also have been wrapped in a similar fashion. Even the sheep or goat in 5423 had woven wrappings.

Skins were the common material for clothing the dead, and they were found in 68 graves (45 males, 15 females, and 3 children). The ratio of males and females buried in skins to the total number of males and females works out at 48 per cent. and 28 per cent. respectively. This form of clothing was therefore distinctly more common among men than women. In five graves, skins were found together with linen (5101, 5374, 5716, 5744, and 5806). The skins do not seem to have been wrapped round the head; in 5774 they were apparently only on the legs, but the body was disturbed; in 5749 the skin certainly stopped short at the shoulders; while in 5735 a complete pelt was worn, wrapped sideways round the back and hips. It was almost universally the fashion to wear the hair inside, next to the body; in three graves, it was to the outside (5342, 5352, 5816); while in three instances, and possibly more, the hair had been removed from the skins (5361, 5377, and 5812). The kind of skin varied; in most instances it was probably goat, but finer varieties were sometimes used, such as gazelle in all probability. In 5758 the two were found together, the finer-haired under the coarser. In 5735 and 5762 the skins were well tanned and covered with fine black short fur, like a cat's. In 5802, leather was crumpled under the head, perhaps by accident, or possibly to form a pillow. The same thing was seen in 5806, and here the leather showed a seam, and an edge oversewn with thong. Seams were also noticed in 5808 and 5803. In the latter grave, there was a scrap of plaited thong as well. These fragments show that it was not, in all cases, just a hide that was worn, but a kaross of skins sewn together, or even a leather garment, like those of the "Pan-grave" people of much later times.

42. There were no instances of multiple burials, not even a grave with mother and child together. In 5123 there were remains of three separate bodies, but this was more probably a plunderer's dump, to judge from the absence of matting and sherds.

As regards segregation of sexes in cemeteries, a curious fact emerges. Female graves were not

placed apart; where there are graves of women there are also graves of men alongside. Certain areas, however, were reserved for men. In Cemetery 5300-5400, the whole of the western or lowest part contains no female grave whatever, with the exception of 5392, where the sex was rather doubtful. In Area 5700 of the southern cemetery, all the graves nearest the *wadi* bank are of men or children, without exception.

43. Some of the physical characteristics of the people may be gleaned from the notes on individual graves. The most easily observed feature was the hair. This varied from brown to black, from straight to curly. Both straight and curly were of all shades; but only 10 cases of straight and 6 of curly were noted, as against 33 wavy. There were 16 black, 11 dark brown, 12 brown, and 1 light brown; 11 had gone grey with old age. It is interesting to note that in no case could a beard or moustache be detected. One infant had light brown hair, and another dark (5737 and 5760). Plaits were seen on one woman (5399), while another had twisted tresses (5411); one young woman (not registered) in Cemetery 5400 had dark brown hair with a curly fringe down to the eyes, like the "heart breakers" in the reign of Charles I. It is interesting to note that in no case could a beard or moustache be detected.

There were individuals measuring 5 ft. only (5763) and over 6 ft. (5805); and a few were noticeably strong and muscular (5353, 5767), but these were the exceptions. 5770 was a very prognathous individual. A particularly prominent nose was noted in 5362, 5373, 5427, and 5767. These details are only mentioned here to give an idea of the diversity of type which was obvious to the observer in the field. The skulls which were brought to London have been measured in the Anthropometric Department at University College, by Miss Brenda N. Stoessiger, B.Sc., and published in *Biometrika* XIX, summarised here in Chapter XXI.

44. No trace was found of coffins of wood or clay. In 5701 there were reeds and sticks forming a distinct rectangle, 38 × 44 ins. The sticks lay along the sides, and this may have been a bier, or perhaps the bottom of a hamper coffin. The grave floor was only 20 ins. below the present surface of the ground. In 5716 was what seemed to be a true hamper coffin; it is described in the notes on the burials. In 5710 the rushes formed a definite rectangle as if they had been part of a more or less rigid receptacle,

while in 5729 there were sticks and matting from a hamper (?), measuring 32 × 40 ins. It is possible that in many of the burials the matting which surrounded the body was kept up by means of sticks, forming a sort of miniature tent. This would have kept the body fairly free from the sand filling of the grave, and explain why evidence of roofing was seldom, if ever, found.

CHAPTER V

THE BADARIAN POTTERY

45. THE most distinctive product of the Badarians was their pottery. It is hand-made, like all Pre-dynastic pottery, and shows no trace of turning. Much of it has the surface wholly or partly covered with a fine or coarse rippling, and it was this peculiarity which led to the discovery of the culture. It had not previously been met with in the Nile Valley, and was quite new to our experience. A number of sherds are shown in the photograph on pl. i to give an idea of the rippled surface; various degrees of fineness are represented. Above are photographs of two of the best specimens of bowls, taken to show the rippling. That on the left was rubbed over with white powder so as to emphasize the markings. It will be seen that the rippling has been done spirally, so as to produce a pleasing decorative effect.

This characteristic surface was no doubt caused by the method used to thin out the clay before baking. The better vessels all have very thin edges; sometimes they are almost sharp. The rippling may extend over the whole outer surface of the pot, it may run half-way down, or it may remain round the rim only; but in all cases where this rippling exists it is at least at the rim. It is difficult to say exactly what instrument was used to give this effect. Whatever it was, it must have existed in some numbers, judging from the quantities of pottery used. As we found no tool in the village rubbish which we could be certain was employed for this purpose, it is possible that they were of wood and have consequently disappeared; and we may suppose that they were more or less curved for the making of smaller or larger vessels. It may be that the combs made of bone, shown on pl. xxiv, 4, fulfilled the purpose, as they were not like the usual combs for the hair. [The comb was observed in one case to have six notches, shown by the repeated groups of ridges. It was used

diagonally, first in one direction, and next in the crossing direction.—F. P.] The curved piece of horn with serrated edge, pl. xxvii, 5, might also have been used for scraping down pot surfaces or some such purpose. On the large rough cooking-pots, the smoothing of the clay with the fingers sometimes gives rise to a coarsely rippled surface.

Some of the thinnest and finest pottery shows no rippling at all, for instance BB19p; we must, then, infer that it was sometimes removed by a rubbing-down process. But it is quite clear that the rippled surface was considered beautiful; it was retained as a decoration, sometimes over the whole pot, as BB41k, sometimes as a mere horizontal fluting on the rim, as PR3f. It probably survives as the cross-nicking, or milling, seen on the rims of the later Nubian or "Pan-grave" pottery.

The rippling rarely appears on the inside of vessels, and then only on some of the wide dishes or bowls (BB5f, 19c, 19h).

46. The coloured wash or slip which was applied to the better class of vessels (BB, BR, and PR classes as distinct from SB and RB) generally shows signs of burnishing. This was done doubtless with a pebble such as is used for polishing pottery to-day in South Africa and elsewhere. This burnishing runs up to the left while the rippling usually runs up to the right; the marks, therefore, where visible, cross at right angles. PR16t and 38f are good examples of this. The burnishing occasionally removes the combing in part, so that the ripple lines are discontinuous. The wash is used for the inside as well as the outside in many of the very open bowls where the interior was the more visible part and a burnished surface was therefore desirable. Sometimes the inside of the rim only is burnished.

The colour of the wash varies apparently according to the degree of heat used in baking and the amount of oxygen present. The black surface is due to the absence of oxygen, while the bright red is more completely oxidized. Whether the polished *brown* surface is an intermediate state or is caused by the use of a different material for the wash has not been determined; probably the latter cause is the true one, as we find a rather sharp distinction between the brown and red polishes.

On some of the smooth but unpolished pots, a wash may have been applied after baking; they certainly show signs of having been burnished.

The clay itself, of which the pots were made, is mostly very fine-grained and close; it was mixed

with chopped straw (*tibn*) for most of the large coarse cooking-pots.

The very great majority of the vessels were found broken. The thin rims of the black-topped pottery were especially liable to crumble away when attacked by salt; the usual open bowl shape and the general thinness of the ware made these pots far too weak to withstand the shock or the pressure of the sand when the graves eventually caved in. Some 230 different forms were drawn (pls. xii-xix); but this had often to be done from fragments only. When we were excavating Cemetery 5100, there was a great number of fragments to be dealt with; it was fortunate that we had a party of seven in camp, at the moment, to fit together the piles of sherds which came in every evening. The pottery drawings give an impression that many perfect vases were found; but very few were anything like intact, and those that were whole were mostly of the thicker wares. Photographs of the best of those found in 1925 are given in pl. xx.

47. The classification which has been adopted is based on the general quality and surface finish, and not on the form. The whole mass may be roughly divided into the finely polished and the unsurfaced or only poorly burnished. The first are nearly always black-topped; the black-topped polished are sometimes grey-brown and sometimes red. The unpolished may have a smooth surface or be quite rough. We thus get five easily distinguishable classes. Following the method adopted in Professor Petrie's *Corpus of Prehistoric Pottery*, letters have been used to denote the classes; but we have used two in each case instead of one, so that the usual Predynastic and the Badarian may be kept distinct. Thus BB stands for black-topped polished brown; BR for black-topped polished red; PR for plain polished red; SB for smooth brown; and RB for rough brown. In addition to these are a few all-black smooth or polished pots which are classed together as AB, and a small number of fancy forms and decorated pots which are grouped together under the heading MS, miscellaneous.

48. *Class BB.* The black-topped brown polished pottery forms a very distinct variety, and is almost unknown elsewhere in Egypt. I have picked up a few sherds of it in the great Early Predynastic town at Hierakonpolis. The extremely thin vessels, and those with the finest, closest, and most even rippling, all come into this class. The excellence of its manufacture was never surpassed in later times. It is

obvious that we have here the result of many ages of experiment ; but there is some reason to believe that the graves in which it is found at Badari are the earliest. The previous stages, which must have existed, are then to be looked for elsewhere.

The black area of the exterior surface of the pot varies from a small band round the rim to the whole surface. Sometimes a small patch of brown is seen on the base only ; and, speaking very generally, the finest pots are those which are most black. In the BR class, the black is always confined to the upper part, owing to the pot being baked mouth downward. The interior of all pots, both brown and red polished, is black without exception. The rippling varies from fine, distinct, and regular, to faint or none. About half the pots drawn show a smooth surface. In three pots, 16e, 37h, and 57m, the rippling is vertical. The colour of the wash varies from grey, or dark neutral earth-brown, to a dull rather lighter coffee-brown shade. There is also a distinct pale brown tint, sometimes yellowish or even pinkish, which is almost confined to pots showing no rippling. On the three light brown pots which are combed, the rippling is vertical.

The forms which have a sharp or distinct angle between the more or less upright sides and the flattish or rounded base nearly all come into this class ; in fact, they compose more than 50 per cent. of it. On the other hand, such forms represent less than 15 per cent. of the PR class. Only two BB's are ornamented in any way : 28h has the interior black surface brightly burnished in a wavy line at the angle formed by the sides and base ; 49f has a cross-hatched Maltese cross burnished on the inside.

Class BR. In the black-topped polished red class, pots with a smooth surface are the exception (about 20 per cent.). The colour of the slip is a bright red or brown-red, with one example only of the plum-red which is usual in the Middle and Late Predynastic periods. The difference between the brown-red and the plum is certainly due to differences in the baking. I have seen black-topped Predynastic pots which exhibit both colours, the brown-red forming a broad band next to the black. Pots with decoration on the inner surface are more frequent in this than in the brown-polished class. They are all bowls, mostly rather shallow ; one has a little thickening just inside the rim, almost amounting to a knob, to give a good hold to the fingers. The decoration is burnished as a fine line on the otherwise dull black surface. The cross appears again

in a modified form 15e ; there are palm(?)-branches, either single 30e, parallel 15p, forming a rough cross 15m, or a six-rayed star 3d ; and there is a simple cross-hatching on either side of a diametrical band of plain burnish. The photograph, pl. xxv, 5, well illustrates this style of ornamentation. Other examples of this form of ornament occur in the miscellaneous class (MS). The bright pattern on dull black occurs also on the Nubian (?) pottery found at Mayana (PETRIE and BRUNTON, *Sediment I*, p. 21). The two pots from Naqada (*Corpus* D71, 72) seem to show a degeneration of the idea. D72 with palm-branches is of s.d. 32. D71 is photographed on p. 126 of Capart's *Primitive Art*. It is of black-topped pottery, black inside ; the design of branches and snakes (?) is incised on the black. It is of s.d. 46, from grave 1871 (p. 125). The forms of the black-topped polished red pottery are mostly open, but vary from shallow bowls to deep bag-shaped vases. Almost all are round-bottomed, and very few show the sharp angle between the sides and base which is such a frequent feature of the brown-polished class. One black-topped cup is included with the fancy forms, MS4.

49. *Class PR.* The polished red pots form a very small class. The rippling of the surface has almost disappeared in most of the examples. The amount of red wash applied to the vessels varies considerably, and so does the amount of polish or burnish ; there is consequently no very sharp distinction between the polished red and smooth brown (SB) varieties. The commonest form is the "carinated" bowl, 9, which is also found in the Early Predynastic or Amratian Period (*Corpus*, P7, 7d, 7e, C64b, d, h, n, s, u, 65m, 66e, m). Large flat dishes, which are rare, are only found in this class. A few fancy forms occur, and also the only examples of painted decoration ; all these are included in the miscellaneous group MS.

Class AB. The pottery which is all black forms a small class, very varied as regards form. Some types are the usual bowls, but the bottle 9, the forms with distinct necks 8, 12, the projecting rims 3, 6, 10, 13, are noteworthy. The shaping inside the rims 10, 11, is most unusual. No. 13 may have been like the ivory vase pl. xxiii, 6, or perhaps more like BB23e. The pottery is rather thick and usually polished.

50. *Class MS.* Classed together as miscellaneous are the cups with a slightly projecting foot, MS1-4 ; these are of polished red ware, while the best form, 4,

is black-topped. Two examples of this form of cup are in the Brussels Museum (E. 2991 and E. 2988, bought). Both are of polished red pottery; the former is decorated in white, with rows of inverted triangles round the bowl and foot; there is also line decoration under the rim, on the rim, and inside. Another is in the Cairo Museum, from Sahel el Baghlieh; it is of polished red pottery with a decoration on the inside, of triangles in thick white paint (QUIBELL, *Archaic Objects*, pl. xix, 11501). No. 5 is a plain cylindrical vase of polished red; and 6, in black, is also probably cylindrical, though it may be a narrow neck. The vases with handles, 7-10, are discussed in Section 52. No. 11 is a very remarkable pot, of rectangular plan, in plain black pottery; little ridges run up each angle, as shown in the drawing; these almost certainly indicate that the form is derived from a prototype of leather with seams at the corners. Nos. 12 and 13 are fragments which seem to be of one type, narrow curved troughs; both are of hard, pinkish-yellow ware; one is simply burnished, the other is polished dark red on the outside with the red forming a narrow band inside the rim. This form seems to be quite new to us. The use of red wash for decoration, as distinguished from a general application all over the surface, is seen in the striped fragments 14, 15, and the partly splashed bowl 16. These and 23 are the only examples of Badarian pottery which are painted in patterns. No. 17, a little ribbed bowl, of pinkish ware, stands alone; the grave in which it was found was plundered, and it is possibly not contemporary; but it is difficult to assign it with certainty to any other date. Nos. 18, 20, 21, and 22 are scraps of bowls, apparently, like the BR15's, with line ornament on the black inner surface; the burnished band in 22 is like the band across BR15h. No. 19 is a sherd where the combing has become a definite regular pecking; a similar scrap was picked up in the Predynastic town at Hierakonpolis. No. 23 is the only Badarian example of the pale pink painting on polished red which is the characteristic feature of the Predynastic cross-lined pottery (Class C). The cross-lined motives are, as the name implies, linear and not punctuated; the dotted decoration is only found in *Prehistoric Egypt*, pl. x, 1, 2; but we found five examples of it at Qau, Hemamieh, and Badari (pl. xxxviii, C18d, 18n, 33k, 44t, and 50s). A little bowl of dark red-brown polished ware, covered with spots in thick salmon paint both inside and outside, bought at Luxor, is in

my possession. Rather similar spots, but in dark red paint on rough pinkish pottery, are also to be seen on the rim of a flare-mouthed beaker-like pot in the Ashmolean Museum, Oxford (E.3138) of s.d. 32-34, from the grave B56 at Hu (PETRIE, *Diospolis Parva*, pl. v, pl. xvi, D76b).

Finally, there is the beaker pot, 24, of black pottery with incised patterns filled in with white; this belongs to Class N of the *Corpus of Prehistoric Pottery*. There is a single hole below the lines of white running round the rim. The inside of the mouth is ornamented with white triangles. The surface of the pottery inside the triangles is covered with scratches as if to give a better hold for the white paint; they are just visible in the photograph, pl. xxvi. One scrap, 25, of another beaker pot was found in Area 5400; and a very small piece of this class turned up in Cemetery 1400; but it was not large enough to give any idea of the form of the vase. The beaker pot in the *Prehistoric Corpus*, pl. xxvii, 58 (at University College, London), was bought; part of another, also bought, is in the same collection. None is therefore closely dated, but specimens of other forms of this class of pottery are dated from s.d. 33 to s.d. 68 (PETRIE, *Prehistoric Corpus*, pl. lxi). In 1928 many fragments were found in Badarian villages.

51. *Class SB*. The smooth brown pots are mostly thicker and clumsier varieties of the BR or PR pottery. The surface is generally burnished smooth, and sometimes has quite a polished appearance. The colour is mostly a pale yellow brown, varying from drab to orange. The burnishing is usually diagonal, but sometimes horizontal (3h) or vertical (41k). There is no definite rippling, but the rim sometimes shows signs of combing (5h, 25r). The forms are shallow or deep bowls, as in all the other classes; some are poor copies of BB, BR, or PR shapes. Thus 9k is like PR9d; 15c like BB28h; 27h like BB57p; 29p like BR15p; 37e like PR16f; and 41k like PR27h.

Class RB. The remainder of the pottery falls into the rough class. It is mostly of a coarse ware, badly baked, and sometimes mixed with chopped straw as in the Predynastic period (7h, 16h, 27p, 31r, 49m). The face is occasionally finished off with little diagonal touches of a stick or comb, giving a very crude rippled effect (31e, 31h); sometimes there is a vague rippling as if the fingers had been used for smoothing (31r). Very rarely, a coloured wash is spread over the surface, red in 23f, brown

in 33k. Most of these pots are for domestic use, and only the smaller examples were placed in the graves. The largest pots are all smoke-blackened, and have evidently been used for cooking. This particular form of cooking-pot is also common in the Predynastic villages (pls. xlii, xliii).

With the rough brown pottery may be mentioned the bins of sun-dried clay mixed with straw which were apparently intended for the storing of grain. The largest was found standing alone at the extreme north-west corner of Cemetery 5300 (pl. x, 5). Its mouth was closed by the rough piece of limestone shown above it in the photograph. It was of sufficient size for one of our work-boys to get completely inside. Although the mouth was closed when we found it, it contained nothing but sand and stones. Two other much smaller clay bins are shown in the photograph pl. x, 3, and the drawing pl. xi, 1. Both come from the village site in Area 6000; that numbered 6000 was empty; 6014A contained the small pot MS9.

52. *Forms.* When the forms of Badarian pottery are considered as a whole, one is struck by their general similarity. Bowls, either shallow or deep, form the great majority. The dishes with straight sides (BB3, 5) and the many-angled varieties (BB8-37, BR3-10) are peculiar to the Badarian pottery, and not found at other periods. An oval form is not unusual; this is not an occasional misformation, but is found in carefully formed and well-finished pots. Oval bowls also occur in the Early Predynastic period, but are quite exceptional later.

A very marked feature is the rim, which is almost always straight; there is hardly anything in the nature of a neck, and a turned-out lip is very rare. In the BB class there is only one, 23e, a very noteworthy case; in the BR there is none; in the PR we find three, 25e, 27h, and 29k, with a possible fourth, 49f. A distinct bottle neck occurs in the quite unusual type AB9, and there are the shaped rims AB10, 11, 13, and a slight neck in AB8, 12. In the MS class, the standing cups have everted rims, and so has the fragment 10. There are four cases among the SB class, 41k, 44h, 44m, and 46p. Finally, there is the well-formed neck to the large vessel RB49m. It is to be noted that the black-topped pottery of early Predynastic times is often without a neck or an everted rim; this is especially the case with the pots found in the villages. A special inner bevelling of the rims is seen in PR27h,

29k, AB3, 10, SR24m, 24p, 41k, 46p, and RB19t; this is generally associated with an everted lip.

Lids. The idea of a specially made lid seems to have been quite unknown. Various devices were employed to cover the pots in the graves. BR34p (5374) was wrapped in linen. Lids of basketry were placed over BR9m (5751), SB44m (5362), RB11h (5736 and 6003), RB39h (5414), and a BB (5719). Sometimes one pot was inverted over another, PR6e over SB24m, SB21m over BR16n, RB16e over BR24m, RB19f over BB77e, and RB25h over BR34p. Thus it was generally a coarser pot that was used as a lid, as might have been expected. In some instances, sherds were used to cover the forms BB64h (5768), BR24h (5801), BR34m (5383), and RB11h (5727).

Handles. These are very exceptional, and foreign to the general nature of the pottery. The four occurrences of handles are classed together, MS7-10, and all are of the loop pattern. Pot 7 is quite unusual, both in form and material. It is of a hard pinkish-buff pottery resembling that of the Predynastic wavy-handled jars. I know of no close parallel to this pot. Its shape and the position of the handles resemble those of the large jar (PETRIE, *Tombs of the Courtiers*, pl. iv, 9) of the 1st dynasty, which is, likewise, of un-Egyptian ware. The neck of ours is, however, much more primitive. Another example from Abydos is figured in QUIBELL, *Archaic Objects*, pl. xxix, 11654; this is of coarse hard ware, which is red outside and bluish inside, with grains of stone in the clay. The inside surface is yellow-brown. Yet another similar vase comes from Palestine (MACALISTER, *Gezer*, pl. cxli, 5). No. 8 is remarkable in its form. On each side are two pairs of projections with broken edges; these are probably the remains of loop handles, and have been reconstructed as such. No. 9 seems to have had a handle across the top, but this is not certain. C62 (pl. xxiii of the *Prehistoric Corpus*) has a similar handle. No. 10 is reconstructed from a small fragment which admits of no other interpretation.

It will be noticed that almost all the pots which present marked peculiarities of form come from the village areas, and were not found in graves. We may deduce from this that the Badarian pottery was much more varied in character than the endless succession of bowls found in the graves would lead us to believe.

53. There are no pot-marks whatever on the Badarian pots, so far known.

Pottery, in spite of the quantities in which it was made, must have been valued. Many cracked specimens were carefully mended in the usual Predynastic fashion. Holes were bored on either side of the crack and the two parts laced together, probably with wet thongs; these contracted as they dried and thus held the broken edges in close contact. BB69m, BR41e, RB31e, are examples. Thus it is seen that coarse pots as well as fine ones were cared for in this way. RB44m, drawn by Professor Petrie, has holes bored in it, but there are no cracks; the reason for this is not apparent.

Position. The almost universal position of the pots in the graves was at the head or hands of the deceased (72 instances). Occasionally a bowl was placed behind the head or back (14 instances). In only three cases was a pot laid at the feet. It was often noted that pots were standing at a somewhat higher level than the floor of the grave, and they were sometimes actually over the hands or above the head. The matting might be over them (5342, 5707), or under them (5357); or again they might be outside the area of the matting (5703, 5724). This variation in position relative to the matting seems to show that the latter was not only used as a simple wrapping, but also as a covering to the grave as well.

Two pots contained organic remains which were probably bread or porridge, BR34p (5709) and RB11h (5738).

54. *Predynastic Pots.* Four pots found in Badarian graves are of types to be seen in the *Prehistoric Corpus*; these are B25b (5436); B77b (6005); R3f, pl. xli (5317); and R69c (5421). Grave 5317 was untouched, and is undoubtedly Badarian, like all the other early graves of Cemetery 5300-5400. Grave 5421 was unusually roughly cut, quite plundered, with scraps of a human skeleton in the filling, and this pot alone at the bottom. Grave 5436 was a typical Badarian grave, but plundered; the Predynastic pot was with three Badarian vessels 12 ins. down in the filling. Grave 6005 was likewise robbed, and besides the pot B77b, contained nothing but the *Nerita* shells which are usual in Badarian graves. Another pot, B57h, pl. xv, is included amongst the Badarian, but it is clearly of the same family as the B62's, pl. xxxvi. This was found standing inverted on the old ground-level in Area 6000, near the Badarian graves, but not in one. In both these areas,

5300-5400 and 6000, there were no other Predynastic remains whatever; in 6000 there were Protodynastic graves near the Badarian; in 5300, nothing earlier than the Old Kingdom. It is necessary, therefore, to consider these five pots as used by the Badarians. Type B25b is s.d. 30-38; the B62's are s.d. 34-45; B77b is 34-36; and R69c is 36-68. Our one example of R3f is s.d. 57-58; but other little rough cups of mud (R3e₂, e₃) are 37-38. There is therefore a distinct connexion with the Early Predynastic or Amratian period.

Many of the forms given in the *Prehistoric Corpus* resemble Badarian types. The following are some of the more obvious:

B 1n	s.d. 39-61	P 7	s.d. 32-34
1p	66	7d	34?
3e		7e	
6	34-46	8a	
6d		8b	37, 43
6e	37	8k	
7b		29	37-39
7f		F 9	
7j		10	
18h		55	
89o		C 63-66	30-34
89r		D 72	32
89u		R 81k	46
		81l	50-58

In addition to these we may notice the decoration of C42d and C50, s.d. 30-34, which calls to mind the palm-leaves (pl. xiv).

A majority of these pots are of the First Predynastic civilization. The rough pots 81k, l, we now know to have been used in the early Predynastic villages (pl. xlii).

Of the types given in the above list, twelve are taken originally from the *Archaeological Survey of Nubia*. This connexion in form with the Nubian pottery is so obvious that it is not necessary to labour the point. Suffice to say that nearly all the black-topped Badarian pots are bowls, inclined to be deep. If we glance at pl. i of the *Prehistoric Corpus*, where drawings of black-topped bowls are given, we see that more than half are taken from the *Survey of Nubia*.

Other Badarian Pots. Ripple-surfaced pottery is hardly ever to be found recorded from other Egyptian sites. Two pots from Naqada, in the

Ashmolean Museum, are rippled. One (type L19b in the *Corpus*) is from grave 114, s.d. 56; the other (type L31) is from grave 31, s.d. 63 (GRIFFITH, *Annals of Archaeology*, VIII, pp. 8, 9). A bowl with a vertically-combed surface was found at Hierakonpolis (QUIBELL and GREEN, *Hierakonpolis II*, p. 22, pl. lxiv, 1); it is now in the Ethnological Museum at Cambridge. It has a thick flattened rim, and in this respect alone is distinct from the Badarian. No record of the grave in which it occurred was published, so that we do not know its date. Similar bowls were found at Abusir el Meleq (MÖLLER and SCHARFF, *Das Vorgeschichtliche Gräberfeld von Abusir el Meleq*, pl. xvi, 96-100); these are now in the Berlin Museum. They are rippled vertically and have a broad flat rim like the Hierakonpolis bowl. They were found in typically Protodynastic graves, and are certainly importations. Mr. Firth has told me that ripple-surfaced pottery was found in Nubia during the Archaeological Survey, but there is no reference to it in the publications. In the Aswan Museum, which contains a representative collection of Nubian antiquities, there is a black-polished deep pointed bowl (E53) which is rippled. This is there classed as B-Group (Old Kingdom). Another pot, shaped like BB6rk, is of red-washed brown ware, with oval mouth, and the rim nicked all round. A similar bowl to the first, but pinky-red and black-topped, is in the Manchester Museum (6307, from Faras). The thick edge is incised with a herringbone pattern; it is probably of the C-Group period (Second Intermediate). Another deep pointed bowl of red-polished rippled ware is at University College; it was bought at Aswan. Pottery with a rippled, combed, or hammered surface is known from early European sites; but it has no other similarity with the Badarian: cp. EVANS, *Palace of Minos*, p. 37, fig. 5. For remarks on rippled pottery, see FRANKFORT, *Studies in Early Pottery*, II, p. 54.

55. *Sequencing*. In our present state of knowledge, it is hardly practicable to attempt a sequencing of the Badarian graves by means of changes of style in the pottery. Sequencing must be based on groups of pots and, at Badari, groups of any value were few and far between. The coarser varieties do not form good material, and groups containing the polished wares are sixteen in number only. If these are examined, we find that BB alone are found in 5, BB and BR together in 7, BB and PR

in 1, BR alone in 1, BR and PR in 2. Groups where more than two polished pots occur are all BB. If we turn to the forms found in these groups and consider the angled dishes and bowls (BB3-37, BR3-10), we see that all the five purely BB groups contain these; only three of BB ware occur in combination with BR forms (out of seven groups); and the only angled BR occurs with a BB. No "carinated" bowl (PR9, SB9) is to be found in a group with BB, but there is an example of it in BB ware (19p).

Looking at the forms in the polished classes as a whole, it may be noted: (i) that the dishes and bowls with a sharp angle between the sides and base are very much more common in the BB class; (ii) that the bag-shaped forms are all BR, with the exception of one angled BB; (iii) that the flat shallow bowls are all BR; and (iv) that the decorated bowls are all BR with the exception of one BB, which is deep.

The rippling occurs in varying degrees in all classes; but the finest is found with the BB angled forms only. The very thinnest pottery is not rippled, but is also all BB.

These various facts are not sufficient to form the basis of any definite conclusions; but they certainly give an impression, if we take the connexion with the "carinated" bowls of the Early Predynastic Period into account, that the BB ware is the earliest, and the PR the latest; that the sharp-angled, finely rippled, or very thin pottery is early; and that both flat bowls and bag-shaped forms are later, while deep bowls run right through the whole period.

[Although we cannot hope to form a complete sequence on such an amount of material, yet it is desirable to make a beginning of a system, in order to have a basis for putting fresh facts in place, either to correct or to supplement what we already know. Accordingly, on the obvious basis of defining the early styles by their being at the bottom of the settlement, and the later styles by being connected with those of s.d. 31 and onward, I have sorted over the groups into the order that appears most reasonable, and divided them into nine sections, numbered s.d. 21 to 29. The results for dates of the types, and dates of the tombs, are given on pl. xix A. Many other datings will also be seen to be probable according to resemblances of form, but they lack, as yet, support from two or more connexions.—F. P.]

CHAPTER VI

THE BADARIAN AMULETS, BEADS, AND SHELLS

56. If we restrict the term "amulet" to ornaments made in the form of some animate or inanimate object, and exclude such things as pierced pebbles and shaped pendants, we find that only two amulets occurred in the Badarian graves. These are the head of an antelope (gazelle?), pls. xxiv, 14, xxvii, 1, and the head of a hippopotamus (?), pl. xxiv, 15. Both of these are carved in bone. The gazelle head was found in the plundered grave of an adult (probably male), 5409; while the other comes from a likewise disturbed grave of a child of some six years old, 5740. Both were found with beads, and the first was apparently worn at the ankle. In its form it is like the gazelle heads which decorate the spoon handles, pl. xxii, 2, 3.

The drawings of the Badarian beads have been included with the Predynastic on pls. xlix, 1. They have all been classified and given *Corpus* numbers in the same way as the beads of other periods in *Qau and Badari*. On the Grave Register there will be seen, over the entries of some of the type numbers of beads, a small circle enclosing a number or letter. The letter S indicates that a string of beads, all of that one type, was found; F means a few; while for still fewer, the numbers 1 to 5 are given. The Badarian can easily be distinguished from the Predynastic beads, in the *Corpus*, as the grave numbers of the Badarian are all over 5000 and the Predynastic under 5000. The position of the beads on the bodies is detailed in the notes on the graves in Chapter III.

The most striking feature of the beads is the absence of faience or glazed frit. All are of stone, glazed or plain, with a few in ivory, shell, or copper. Of hard stone there are only carnelian, red and green jasper, and various other natural pebbles. In softer stone there are slate (?), breccia, white, green, and yellow calcite, and varieties of limestone, red, pink, grey, and green, pink and white banded, and alabaster. Steatite is common, both white and glazed bluish green; there is also black and grey soapstone, and serpentine. Turquoise was most probably used, but it is difficult in the field to distinguish it from glazed steatite. The fine holes in the little cylinder beads of stone may have been pierced by a metal instrument. Professor Petrie tells me that, in India, hard stones are drilled with a thorn fed with emery powder.

There is little that is remarkable about the forms of the beads. There are no long cylinders; short cylinders and thick ring beads with flat edges, 75a₁₂-c₁₅, 86k₁₈-k₃₀, are by far the commonest types. Barrels, spheroids, and rings with round edges are the exception. The type, 86r₁₄, thick ring beads with sides that are not parallel, all from Badarian graves, seem to have been cut up from a long cylinder. The most carefully formed beads are the rings with sharp edges, 86t₁₀, t₁₄. Two examples of ornamented forms are the multiple 76a₃ of ivory, which may have been intended for subdivision, and 80c₃, of white steatite, with incised grooves forming chevrons. The copper bead 86w₃ is made of metal ribbon wound up spirally, as shown in the drawing. Various shapes of pendants, type 89, are common, as in the Predynastic period. Similar pendants are in the Aswan Museum (B-group, from Nubia). Half of a very large barrel bead (?) of black clay (pl. xxiii, 32) comes from the Cemetery 5700.

57. Shells are very common, being found in forty-two graves. They are much more usual than in the Predynastic period; the Badarian resembled the "Pan-grave" man in his love of these ornaments. We must remember that though these shells have now faded to white, they were once brightly coloured. A list of the various species which have been identified is given in Chapter IX. All come from the Red Sea. Of the various kinds, *Nerita* is the commonest (19 graves); next comes *Ancillaria* (13 graves); *Conus* occur in 8, and *Oliva* and *Natica* in 6 each. The others are only found sporadically. *Oliva* and *Natica* are not found with men, but this may be accidental, as the occurrences are not many, and all shells and beads are more commonly found with children than with men or women. The women's graves are, however, probably far more robbed.

Beads and shells were usually worn as necklaces by women and children; men wore a single long bead only at the neck (5705, 6018), like the name-bead in dynastic times. Bracelets are less usual; shells and beads were found at the wrists of women (5390, 5738), though the sex is doubtful in each case; shells at the wrists of men (5712, 5762). A large pendant was at the left wrist of a man (5735), or at the right arm of a child (5711). One young child had a circlet of two rows of shells (5733). Three children, not infants, had girdles of shells (5364, 5701, 5733); while three men had masses of beads

running round and round the waist (5705, 5721, 5735), all of green glazed steatite. In two graves only were anklets noticed, a young child with two shells (one at each foot?, 5134), and a woman (?) with shells and pendants (5738). One large pendant was found with the flints beside the man in 5744, but we cannot be sure that he was not disturbed.

Beads were threaded on cow's (?) hair (5807); and flax thread has also been identified (Section 120). Beads were also used for inlay in ivory bracelets (pl. xxiii, 14), and perhaps also in slates (pl. xxi, 2). For some comparisons of Badarian and Predynastic glazed steatite beads, see Chapter XVI.

CHAPTER VII

MISCELLANEOUS BADARIAN OBJECTS

58. *Stone Vases*. No stone vases or fragments were found in graves. Parts of three vessels were dug up from débris, one (pl. xxiii, 11) in Cemetery 5100, and two (pl. xxiii, 9, 10) from Area 5400, probably village rubbish. All are of black or dark grey basalt, a usual material for vases of the Early Predynastic period. Little can be deduced from these scanty remains. The lightly-scratched vandykes on 11 (photograph, pl. xxvii, 2) are similar to the decoration of the basalt vase at University College (PETRIE, *Prehistoric Egypt*, pl. xxxvi, 50; pl. xlii, 219; bought), which is of a form resembling the Badarian and Early Predynastic "carinated" bowls, such as PR9. The spreading foot of 10, pl. xxiii, is a particularly interesting feature. It is seen in the Badarian ivory vases, pl. xxiii, 5, 6, 8. A black polished pot from Naqada shows the same form (*Prehistoric Corpus*, pl. xix, 96b), s.d. 34. We also find it in the stone vases at University College (*Prehistoric Egypt*, pl. xxxvi, 51-54, pl. xlii, 215-218, 221). These are without history, all being bought; but Professor Petrie classes them as Amratian or Early Predynastic, and probably of Libyan origin (p. 36), and connects them with the basalt vase found at Mersa Matruh by Oric Bates (*Ancient Egypt*, 1915, p. 163, fig. 12), and another found by Reisner of the Early Predynastic age (*Archaeological Survey of Nubia*, 1907-8, grave 17-6, pl. lxiv, b1). A fine basalt vase with splay foot, 11 ins. high, is in my possession; it is said to have come from Edfu. A porphyry vase with splay foot, of unknown source, was sold at an auction at Messrs. Sotheby's on the 30th of May 1927. A grey granite example

now heads the series of stone vases in the British Museum (No. 29306). Another with a wide flat rim, in porphyry, is in the possession of Dr. von Gwinner; it was bought at Luxor (SCHARFF, *A.Z.* 1926, Band 61, pl. ii, fig. 3). This widespread-rim is a very remarkable feature. A small vase of red granite with wide rim and splay foot from Gebel Tarif, with a mark on the rim, is in the Cairo Museum, No. 14390 (QUIBELL, *Archaic Objects*, p. 259, pl. lv). A very similar one, which I have, is of basalt and rather larger, 4 ins. high; it was bought at Luxor. For others, see DE MORGAN, *Origines*, figs. 498 a and b, 502 a and b; these came from El Amrah, where there is an Early Predynastic cemetery.

59. *Ivory Vases*. These are all drawn (pl. xxiii, 1-8), except a very small one which is shown in the photograph, pl. xxvii, 1. All the larger ones were in very bad condition, the flakes falling apart with the slightest touch; paraffin wax, however, consolidated them sufficiently to allow of the forms being drawn. Five are more or less cylindrical (5-8, and pl. xxvii, 1), and three of these have the splay foot just referred to. No. 8, without its connexions, would certainly have been ascribed to the Early Dynastic age. But a plain cylinder is of s.d. 31 (REISNER, *Arch. Survey of Nubia*, 1907-8, pl. lxvi, a8; *Prehistoric Egypt*, p. 40). No. 1 has a little hole under the rim, like the beaker MS24. A curious little vase is 3, almost xviiith dynasty in its form; the lugs at the sides seem to be imitations of vertical loop handles. It contained ground malachite in the form of a paste, and was lying with a slate palette. Unlike the pottery, these ivory vases show a variety of forms of rim; 5, in particular, is very carefully worked. In the photograph, pl. xxvii, 2, is a little piece of bone incised with a criss-cross pattern; this may be part of a small cylindrical vase. Somewhat similar vases of ivory of s.d. 34 are seen in AYRTON and LOAT, *Predynastic Cemetery of El Mahasnah*, pl. xii.

Ostrich Eggs. These were used as receptacles. In grave 1414 was an egg which had had about one-third removed at the side. The edge was carefully smoothed; cracks were mended by lashings through holes; and a row of holes runs round close to the edge, either for decoration or suspension.

Ostrich feathers were found lying flat and fanwise in grave 5754.

60. *Human Figures*. Three small figures, all female, were found in graves. They are shown in

drawing, pl. xxiv, 1-3, and in photograph, pl. xxv, 3, 4, 6, 7. The various circumstances of their discovery are recorded in the details of the graves 5107, 5227, and 5769. There is no reason to place any of them later than the Badarian age; yet they all differ very much in type as well as in material. No. 1 is of baked pottery, the surface covered with a bright red wash. No. 2 is of elephant ivory, very close-grained. Fortunately for us, the ivory, though broken when found, was in perfect condition, and required no preservation whatever. No. 3 is of unbaked clay, and had to be soaked in paraffin wax.

Figure 1 has a particularly narrow waist and is somewhat steatopygous; the breasts are small and pointed; the arms are folded in front, and the hands are clearly shown: the pubic triangle is wide and shallow with faint horizontal lines.

Figure 2 has very little waist and no trace of steatopygy; the breasts are long and pendulous; the arms below the elbows become merged in the loins, and we cannot say whether they are meant to be resting on the hips, or folded across in front, or even at the breasts. The first is the probable solution, as there would have been no difficulty in showing the forearms in relief, if desired. The feet are little vague projections; the pubic triangle is narrow and deep, with a criss-cross of horizontal and vertical lines; the face is very remarkable with its huge eyes and nose, and small slit of a mouth. A very noteworthy point about the statuette is the way in which small details are indicated; thus the pupils, the nostrils, the nipples, the dimples at the base of the back, and a little vertical groove at the back of the head like a hair-parting, are all very carefully put in.

Figure 3 is by far the most crude and clumsy. It may have been intended for a doll, and buried as such; this would account for the roughness of its make. It has a marked waist, and is highly steatopygous; the breasts, now broken off, were small and not pendulous; there are no arms, nor defined legs, the figure ending in a rounded point; the pubic triangle is wide and rather shallow, and crossed by diagonal lines. The head is a small knob, the eyes being each indicated by a pair of incised parallel lines. On the front of the neck is what is evidently a string of beads; this is not shown at the back. Behind each shoulder are incised four parallel lines running nearly to the waist, while in the centre of the back are three chevrons. These lines on the back may represent cicatrices or tatuing.

There are few points of similarity between the three figures. The pottery and clay figures are most alike in type, allowing for the careful work of the one and the roughness of the other. The tendency to steatopygy, the well-marked waist, the small breasts, and the similarity of the pubic triangles seem to show that it was the intention to represent women of similar racial types. The ivory statuette is absolutely distinct in every way where comparison is possible, and clearly represents an entirely different race.

61. Human figures carved in the round, of Predynastic date, are almost all of the Early period (PETRIE, *Prehistoric Egypt*, p. 6), and are not found again until Protodynastic times, when they are plentiful, as at Hierakonpolis and Abydos. Of our three figures, the only one which resembles the Early Predynastic (Amratian) statuettes is the steatopygous female in clay. Figures of this class are of s.d. 31-34 (*Pre. Eg.*, p. 8). The nearest parallels are perhaps the two clay figures at University College, both without history (*Pre. Eg.*, pls. iv, 1, 9; v, 1-3); the attitudes, the parallel lines for the eyes, and the bead necklace are points in common. The tatued chevrons on the back are rather like the V-marks on the clay steatopygous female figure (PETRIE, *Naqada*, pl. lix, 6; *Pre. Eg.*, pl. vi, 4, 8); and the face is inclined to be beaky, like the figures at University College (*Pre. Eg.*, pls. iv, v). On the other hand, these others all have a line dividing the legs.

There are no close parallels to the pottery figure, 1. The painting with red is not unusual (*Pre. Eg.*, pp. 7, 8). The most striking thing is the attitude of the arms, crossed in front. There are no Predynastic parallels to this; but of Protodynastic date we have the lazuli figure from Hierakonpolis in the Ashmolean Museum (QUIBELL, *Hierakonpolis I*, pl. xviii, 3); the ivory lately in the MacGregor Collection (CAPART, *Primitive Art*, fig. 129); and three ivories in the British Museum (*ibid.*, fig. 128). These ivories are not dated, but are probably Protodynastic, from their resemblance in style to the Hierakonpolis examples. There is also a female figure (*Pre. Eg.*, pl. ii, 31) which Professor Petrie would class with the Predynastic ivories.

The ivory statuette, 2, stands quite alone in style. The racial type with the large eyes and broad nose is, however, much like the male and female figures at University College (*Pre. Eg.*, pl. ii, 23, 24). The feet are indicated in both, and the woman has

pendant breasts like ours. This latter feature is, however, found on many Predynastic figures, both with and without steatopygy. The presence of prominent ears in both, on the other hand, is a marked difference, as they are not even indicated on the Badari statuette.

These three human figures in the round from Badari are the oldest so far discovered in the Nile Valley; in fact they are only exceeded in age, apparently, by the Late Palaeolithic statuettes from southern Europe.

62. *Bracelets*. Pl. xxiii, 12-23. These formed a rather prominent feature of the Badarian culture, as they occurred with nineteen burials. We may take it that they were as a rule worn by the more wealthy persons only, as fifteen of these graves had been plundered, and one that had not, 5705, contained the body of a man with a mass of beads round the waist, showing him to have been a person of standing. We find bracelets worn by males in five instances, females in two, and a child of about five years old in one. They do not seem to have been worn as armlets, for we found a couple in 5126 still on the bones of the forearm, one in 5745 on the right wrist, and one in 5719 near the child's hands. They are generally found singly; but there were remains of five in 5151. The material is always ivory, with the exception of one of horn or tortoise-shell (5745). They are always, when in ivory, made with a sharp ridge running round the circumference; one, pl. xxiii, 15, has two ridges. The edges on either side of the ridge are concave in the best examples, 12-16, convex in 17-23 which are mostly of much lighter make. One, 14, is inlaid with steatite beads, now white but probably once blue glazed, in alternating curves. The only other form of decoration is a succession of rounded knobs, 18, found on three examples, two drawn, and a scrap from Cemetery 6000. This last had holes in it, for mending purposes. The bracelets were always in small fragments, and in six graves the fragments were quite undrawable.

Ivory bracelets are usual in the Predynastic period, from s.d. 31 onwards; but they tend to get smaller in the later periods (PETRIE, *Diospolis Parva*, p. 21); they are, however, not of the typically Badarian form, nor are they ornamented.

Finger-rings. These occur in five graves; two are of plain ivory (4803, and 5453 probably a ring); two of horn or tortoiseshell (5438, 5448); and one of

fish vertebra (5762, pl. xxiii, 24). Two are with women; the last was with a man.

63. *Ear(?) studs*. Pl. xxiv, 7-12. Small round objects of fine black clay were found in six of the graves of Cemetery 5100, one from Cemetery 5200, and five from the village areas 5400, 5500, and 5700. One from the 6000 village is of red pottery and nail-shaped, unlike the others. Photographs of four are shown on pl. xxvi, one on pl. xxvii, 2, and seven on pl. xxvii, 5. Amongst the latter is a plug or stud marked *nn*. This is probably the stud from 5200; it is much more roughly made than the rest. The graves in which these curious little objects were found are 5104, 5112, 5120, 5143, 5151, and 5155. There were two in 5112, one much larger than the other. All these graves were robbed, and, as we never found one in position, we cannot be certain how they were used. They may have been stoppers of some kind, as they are always wider at one end than the other. They may also quite possibly have been used as ear-studs, like the round reel-shaped studs of the New Kingdom (C. R. WILLIAMS, *Gold and Silver Jewelry*, p. 115; PETRIE, *Objects of Daily Use*, p. 22, pl. xvii, 39-51). They appear to have been introduced from the south; a large distension of the ear-lobe is a particularly African custom. One was with a female (5151), and one with a male (5155).

Nose-stud. Pl. xxiv, 13; pl. xxvii, 5. This little stud of pale green stone was taken from the wing of the right nostril of a man, in grave 5359.

Combs. Pl. xxiv, 4, 18; pl. xxvii, 1, 2. The ivory comb, pl. xxiv, 18, with long teeth, comes from a robbed grave, 5130. It is curved, and was probably worn in the hair as an ornament like a Spanish comb of the present day, rather than put to a practical use. The two projections call to mind the double bird-headed slate palettes of the Middle Predynastic age (*Corpus*, pl. lvi), but no Predynastic combs resemble this one, as they all have straight sides in line with the two outer teeth. The majority of long-toothed combs are Early Predynastic, and none is later than s.d. 47 (*Prehistoric Egypt*, p. 29).

The pair of bone combs, pl. xxiv, 4, are like none that we know. It may be that they were used for working down the surface of the soft clay in pottery making. They were beside the woman (?) in grave 5390, and not in her hair.

64. *Slate Palettes*. Pls. xx, 16; xxi, xxvi, xxvii, 1, 3, 5. Twenty-one of these characteristically Predynastic objects were found in the Badarian cemeteries at Qau and Badari. One found loose

in Cemetery 400, at Qau, probably came from a grave; and if that is so, we can state that none was found in the villages. The forms are, with one exception, all long rectangles, the sides straight or slightly convex. One or two are very slightly concave-sided. A different form is shown in pl. xxi, 19, a sharply pointed oval. Nos. 1 to 6 have straight ends; 7 to 13, pl. xxvii, 1, 5, have the ends concave; 14 has a wide curved notch; 15 and pl. xx, 16, have convex ends, the former with a little notch; 16 to 19 (and the scraps in 5428) have narrow notches, varying in depth. They are all of an even thickness, with good flat surfaces. Only one, 11, shows any ornamentation; it has three round hollows at each corner, for the insertion of shell beads, in all probability.

Signs of wear appear in some. The pebbles which accompany them in Predynastic graves were noted in eight cases; two of them were of green jasper. With the palette in 5112 was a round lump of green malachite paste, and green paste was in the little ivory vase (photograph, pl. xxvi). Malachite was also found in 5163, and probably in 1414. It was therefore much less usually put in Badarian graves than in Predynastic. There was no sign of galena. There are traces of red paint on the slate palette 3; there is also red paint on five Early Predynastic rhomb slate palettes in the Cairo Museum (QUIBELL, *Archaic Objects*, pp. 226, 227). *Spatha* shells were found with the slates in 5403, 5428, and 5444, and also with the malachite in 5163. I have found one, containing the remains of thick whitish substance, in an Early Predynastic grave, together with a rhomb palette and pebble, all in a little pile. Probably the shells contained grease to mix with the powdered mineral (see PETRIE and QUIBELL, *Naqada*, p. 10).

The position of the palettes was near the face, head, or hands, in six undisturbed graves; over the knee in one, also untouched; and by the leg in 5744, where the body was in a very strange attitude. The position, then, is the same as that of the Predynastic palettes. They were all single except in 5744, where two were found. Four were with males, four with females, and one with a child of about ten years.

65. The palettes are arranged on pl. xxi in the order of date, so far as the very meagre indications allow us to judge. Assuming that the finest rippled and angled pots are earlier than the rougher and thicker unrippled bowls and bag-shaped vases, we

find that the straight-ended palettes are associated with three of the former and one of the latter; that the concave ends are found with four of the former and two of the latter; and that the notched ends occur with one of the former and four of the latter. This classification of the pottery is a very indefinite one, and forms only a vague basis for sequencing. But if the Badarian age precedes the Early Predynastic, we get some confirmation of the theory that the notched slates are the latest from the finds of similar palettes elsewhere. In the Cairo Museum is a slate, 14154, an elongated rough oval with deep notches at the ends (QUIBELL, *Archaic Objects*, pl. xlv, p. 224). This is said to have come from Naqada, where we know of no other Badarian remains, but much Early Predynastic (Amratian). A very similar palette was found in grave 209 at Maḥasnah (GARSTANG, *Maḥasna*, pl. iv). This was with a cross-lined bowl, and one pot of s.d. 31-52, and is therefore Early Predynastic.

Apart from this Maḥasnah palette, we have little to couple the Badarian slates with the Predynastic forms. The rhomb is the common shape in the early periods, but there is never any trace of notch, and there seems to be no connexion with the late Badarian pointed oval. The Badarian palettes are never pierced for suspension; if we examine the Early Predynastic slates in the *Corpus*, we find that they are much less often pierced than the later ones.

I know of only two other Badarian palettes. One I bought at Luxor; it is an elongated pointed oval with notched ends, like the Cairo specimen. The other is a little rectangle with small notches, at Brussels (E.2883, bought).

66. *Ivory Spoons*. Pls. xxii, xxvi, xxvii, 6. These form another striking feature of the Badarian culture. They occurred in ten graves; four were not drawn, being too fragmentary. In 5152 there seemed to be two, a larger and a smaller; in 5449 was part of a handle only; while that in 5710 was small with a plain handle, apparently, and round bowl. Some have a deep rectangular bowl, others a round one. The handles in most instances end in animal forms, which are impossible to identify, except the ibex or gazelle (2, 3). No. 5 may be intended for a frog. These figures may be in pairs, one on each side of the handle (4-7), or single (2, 3). No. 2 seems to be a clumsy variation of 3, with the body and legs in one mass. The antelope in 3 seems to stand on projections something like the two heads in 4.

One was found with a man, one with a woman, and two with children. In three undisturbed graves, they were before the face and at the hand. These spoons appear to be for eating with, rather than for the toilet as in dynastic times. Some are more in the nature of dippers for porridge, and seem to be African in their affinities.

The vague indications of sequence afforded by the associated pottery suggest that the round bowls and double animals (5, 7) are the earliest, while the square bowls with the double heads or single antelopes are later. The latest, by the pottery (PR27h), would be 3; and this handle reminds us of the animals on the "hair-pins" (*Prehistoric Egypt*, pl. viii, 1, p. 30, probably s.d. 33-38; and pl. liii, 23, s.d. 33-42; and on the comb (pl. liii, 32, s.d. 33-42). The "hair-pins" in neither case are complete, and it is just possible that they are spoon-handles. No spoons are otherwise known in the Early Predynastic period, though they become common later (*ibid.*, p. 31). The square bowl only occurs again at the end of the Predynastic period (PETRIE, *Tarkhan I*, pl. xiii; *II*, pl. ii; also Cairo Museum, 43504, from Naqada).

Ivory Wands. In grave 5143 were a pair of ivory sticks (pls. xxiv, 6; xxvii, 2), one-third plain, two-thirds deeply grooved in a spiral. They were in very bad condition, and the length is not certain; but the plain end is well defined, and is slightly concave. The use of these is quite obscure; similar objects are apparently unknown.

A much smaller ivory stick, with the end grooved transversely (pls. xxiv, 5; xxvii, 2), comes from 5118. The plain end is broken off just where it begins to swell slightly. It cannot therefore be a pin, but it may just possibly be the handle of a small spoon.

Some fragments of ivory in 5124 seemed to belong to a stick or wand of some kind, but it was not possible to draw them.

67. *Throw-sticks.* Pls. xxiii, 29; xxv, 1, 2. These interesting objects were found lying close to the hands of a man (5716), one on the top of the other. The wood was extremely light and the surface powdery; they were treated with celluloid solution and can now be handled. The upper one was complete, except for a small portion at the top. The upper part of the lower one is missing, and was not in the grave. They were therefore old and disused when buried, or possibly "killed." The decoration consists of three rows of little dots down

the centre of the whole length, and a border of chevrons along the edge of the handle. The dots are impressed rather than carved, as if a row of beads had been hammered on to the wood.

Actual specimens of throw-sticks are rare. The next in date that I know of is one from Kahun (PETRIE, *Kahun*, pl. ix, 30). This is of similar form, but much larger, 17½ ins. long compared with the 7½ ins. of ours.

The throw-stick occurs as a hieroglyph, often in combination with the alighting duck (GARDINER, *Egyptian Grammar*, p. 462); and it is frequently seen in tomb paintings of fowling scenes. On the slate palette, British Museum 20790 (CAPART, *Primitive Art*, p. 231), the hunters seem to carry throw-sticks in addition to their other weapons. On the Predynastic decorated vases, men also apparently carry them (*ibid.*, p. 118), but the most interesting representation is on the vase from El Amrah (MACIVER, *El Amrah*, pl. xiv, D46) of s.d. 50, where there are two men and one woman. One man holds two small angled sticks in one hand, and the other man also seems to hold two. MacIver suggests that these are castanets, played for the woman who is dancing (p. 42). If this is so, it is quite possible that our "throw-sticks" are castanets; this would account for their small size, and for there being a pair in the grave.

68. *Needles.* These are all of bone; some are drawn, pl. xxiii, 26-28; others are photographed, pls. xx, 16; xxvi; xxvii, 1; xxix, 4. In addition to these, there were two coarse and one fine in grave 5705 (pl. xxvii, 4), and a broken one with an unfinished above the finished eye in 5747. Another example of unfinished eyes is shown in pls. xxiii, 28; xxvii, 4. Here there were two attempts above and below the actual hole, and two more at the side. It is hard to believe that the eyes were so difficult to bore; but the intended insertion of beads as ornaments is most unlikely. Pl. xxvi shows a needle with a new eye, made after the old one had been broken. The straight needles are finished off square at the ends. One was carefully kept in a little case made from a small bone-shaft, to preserve the point (pl. xxvii, 1). A copper needle or pin in a similar bone case of s.d. 37 is shown by Reisner (*Arch. Survey of Nubia*, 1907-8, pl. lxvi, a12, grave 1750, p. 120; and grave 1756, p. 120. Aswan Museum C.57).

Three needles are curved; one, pl. xxix, 4, is a very long one made from a rib, over 12 ins. long;

another, from 5409, only measures 3 ins. (pls. xxiii, 27 ; xxvii, 1). The third comes from Cemetery 5400.

Four graves of men contained needles, one having three ; two were with women. The presence of these coarse bone needles is easily accounted for by the quantity of leather used ; we have noticed how it is sometimes found sewn (Section 41). Needles are also required for basket-work, and the very long rib needle was probably used for mat-making. For sewing linen, it is not improbable that copper needles were used, but we found none.

No bone needles are recorded from Predynastic graves, nor are any mentioned in Professor Petrie's *Tools and Weapons*. We found one in a grave of the vii-viii dyn. (*Qau and Badari I*, p. 66). They are found in the Early Dynastic or B-Group period in Nubia (FIRTH, *Arch. Survey of Nubia*, 1908-9, pl. xxxviii, d5) ; C-Group (*ibid.*, grave 58·16, p. 56, and grave 87·12, p. 160) ; and New Kingdom (*ibid.*, grave 72·274, p. 87, pl. xxxviii, d6, mis-called B-Group on p. 8).

Pins. A copper pin, nearly 3 ins. long, is the only metal implement found in all the Badarian sites (pl. xxvi, 5112). It is true that it came from a robbed grave ; but the associated objects were all characteristically Badarian, and there were no graves of other periods in the near vicinity from which it could have strayed.

Copper pins are known from the earliest Predynastic graves (*Prehistoric Egypt*, p. 26), but these have a loop head and are of much lighter make than the Badarian example, which might almost be called a borer.

Pins of ivory or bone come from 5112 and 5397. These may, however, be merely the pointed ends of needles, or the teeth of combs.

Pointed sticks of wood were found in three graves. In 5719 there were two, about 9 ins. and 8 ins. long, shown in the photograph, pl. xxvii, 6. In 5729 was a pair of little pointed sticks, 2·7 ins. long, swelling out for half their length. In 5755 was a group of five wood points, a single long one, two medium, and two small.

69. *Bone Awls.* These piercers or awls were found in considerable number in the Areas 5200, 5400, 5500, 6000, mostly from village sites. A dozen were found in graves, and three of these are photographed (pls. xxvi ; xx, 16 ; xxiii, 25). Nine of them were with males, and one only with a female (5734). In two cases, they are accompanied by bone needles (5705, 5739). It seems probable

that piercing holes in leather was one of their uses. They are made from the femur of some bird.

Similar awls were found in the Predynastic villages at Badari and Hemamieh (pls. lviii, 5, 6 ; lxx, 29 ; lxxiv, 214). Two are shown in GARSTANG, *Mahasna*, pl. iv, grave 229, of s.d. 36-43. Others are from Abydos, Late Predynastic (PEET, *Cemeteries of Abydos II*, pl. iii, a12-16, p. 4), and from the Predynastic settlement of Tukh (Naqada) (DE MORGAN, *Origines*, figs. 303-307). There are many from Nubia in the Aswan Museum, both of Predynastic and B-Group date. Several of these are published in the *Archaeological Survey of Nubia*, 1907-8, pl. lxvi, a13, graves 17·56 and 17·95 (Early Predynastic), grave 17·55 (Late Predynastic) ; pl. lxvi, b36, b38, grave 45·494 (Early Dynastic) ; 1908-9, pl. xxviii, d1, grave 72·261 (C-Group) ; pl. xxxviii, d2-4, grave 79·137 (Predynastic) ; 1909-10, p. 119, grave 101·58 (C-Group).

Bone Flint-working (?) Tools. Pl. xxvii, 6 ; two, pl. xxix, 2. These are made from the scapula of a large animal ; the thick part is easy to grasp in the hand, when properly held ; the tool ends in a sharp edge, much like a chisel. Two were found in the village Area 5400 (one, pl. xxix, 2, the other had lost the thick part). One comes from a grave, 5719, where it was associated with various objects (pl. xxvii, 6). Among them will be noticed the rough flint core. The fourth, 5451, was found in a hole with a number of very rough pieces of flint, a damaged or re-worked celt, and a saw-edged knife. There was also a scrap of animal bone, and part of a thick rough cup of black pottery. Some of these are shown in the photograph, pl. xxix, 2. The association with rough flints in two cases has led to the suggestion that this implement may have been connected in some way with the flint-working industry.

Fish-spines. The dorsal spines of the *Lates niloticus* were made use of, as in dynastic times. Four were turned up in rubbish, from Areas 5100, 5200, and 5400 ; and three were found in graves (5104, 5105, 5112). For dynastic examples, see *Qau and Badari I*, sect. 159.

Hooks were found in two graves, one of ivory (5164, pl. xxiv, 17), the other of shell (5738, pl. xxvii, 1). A third, also of shell, was with the group of very rough flints buried in a hole (5213, pls. xxiv, 16 ; xxix, 1). Their purpose is obscure ; there are no fish-hooks known, so far, from Predynastic sites (PETRIE, *Tools and Weapons*, p. 37).

70. *Baskets* were sometimes detected in the graves, but could never be removed, owing to the extreme state of decay. A scrap of one is shown in the photograph, pl. lxi, 5, from grave 5110, and is referred to in Mr. Midgley's report, Section 142. In 5112 there had been a basket, probably to contain some of the smaller objects. A tiny basket was at the elbow of the body in 5720, and a small basket lid lay on top of the skull, covering some small copper object which only remained as a green stain on the linen head-cloth. In the village group 5548 were three baskets, two round, containing the stone slabs and ivory jar, one small and rectangular, empty. Basketwork was used as lids for pottery; see Section 52.

Pottery Boats. Two little model boats were found in Cemetery 5100; these are rough little troughs with no rendering of details. In grave 5452 was another (pl. xxiii, 33), with the after-part widening out, and one hole pierced in the port thwart. This is like the model boat from the Abydos temple (PETRIE, *Abydos II*, pl. iii, 20). For other model boats of Predynastic times see pl. liv, 18-20.

Animal Figures. A small pottery figure of the hinder part of a quadruped comes from Area 6000 (pl. xxvii, 5). It seems to be intended for a hippopotamus from the size of the legs; but the head and forequarters are missing. In the opposite corner of the photograph is another little piece of pottery, marked *nn*, which may be part of an animal figure.

71. *Pierced Disks of Pottery.* These seem to be entirely domestic objects, and come from Areas 5200, 5400 (pl. xxvii, 5), and 5700 ($1\frac{1}{2}$ ins. in diameter, of black pottery). One was with a grain-grinder, in the hole numbered 5117; and one other comes from 5125, which may or may not be a grave; with the last was a flint arrow-head. Several were found in the Predynastic villages (pls. lviii, 5, 6; lxx-lxxiv). Others come from the Early Predynastic village at Maḥasnah (GARSTANG, *Maḥasna*, pl. v, p. 6), and from the Late Predynastic village at Abydos (PEET, *Cemeteries of Abydos II*, pl. iii, b9-11, p. 5). Some decorated disks were found in the settlement at Tukh (Naqada) (DE MORGAN, *Origines*, figs. 493-6). Their purpose is doubtful; they are scarcely heavy enough for spindle-whorls, yet from their round shape it may be inferred that they were meant to rotate.

Spindle Whorls. A breccia object was discovered

in grave 5152 (pl. xxvi) which may be a whorl; it is not domed, however, both sides being somewhat rounded. With the ivory vase, porphyry slabs, and baskets of the village group, 5548, was a well-made disk of pink limestone, rounded on both sides, and with a sharp edge (pl. xxiii, 30). This may have been used for spinning; but neither of these objects is like the later dome-shaped spindle-whorls. Barrel-shaped whorls were found in the North Town at Ballas (PETRIE and QUIBELL, *Naqada*, p. 2).

Hippopotamus Tusks come from four graves. None is ornamented in any way. In 5390 was a portion of one, measuring $4 \times 2 \times 2$ ins., with flint flakes and other objects, at a woman's (?) hands. In 5437 was another, also with flakes, but disturbed. A photograph of a third, with a flint core, etc., is shown in pl. xxvii, 6; this was with a young child, and untouched. The fourth was in 5114. The point of a fifth was loose in Cemetery 5100.

Animal Horns. Two pairs of small horn-cores were with the domestic group 5548 (see Section 13). One long thin straight antelope horn was in 5105. The absence of horns contrasted with the numbers found in the "Pan" graves of Cemetery 5400.

Crocodile Plates come from Cemetery 5100, one loose, and one in grave 5115.

72. *Rubbers* of hard-stone were found in the village (?) groups, 5117 (quartzite sandstone) and 5124 (hard grey igneous stone). With the latter was a mass of organic matter, probably of vegetable origin. Another comes from town rubbish in 5400, and a fourth from 5500. This last is $4\frac{1}{2}$ ins. long, and coloured red as if it had been used for grinding down red paint. These hard gritty pieces of igneous rock of a long oval shape, with rounded ends, but top and base worked flat, were found in some numbers in the Predynastic village sites, and the larger ones were almost certainly grain-grinders; the smaller ones could be used for treating skins.

Small rubbers (?) are of quartzite (5719, pl. xxvii, 6), alabaster (5719), three of hard grey stone (5739, pl. xx, 16), and a rough lump of quartzite (under the feet, in 5418). In grave 5371 were eight grey stones, all burnt, perhaps for making a little fireplace, or to use as pot-boilers. In 5719 was a flat piece of grey schistose rock (pl. xxvii, 6).

Polished pebbles were used for grinding malachite on the slate palettes (5112, 5152, 5403, 5444, 5720, 5739, 5744, 6021). In four disturbed graves the pebbles remained, but the palettes, if there had been any, had gone. These pebbles were used for other

purposes than the grinding of paint; in 5112 there were nine small pebbles (three in pl. xxvi); and they occurred in four undisturbed graves without palettes. In 5390 and 5739 were several, in each case with a lump of red ochre (pl. xxvii, 4; xx, 16); and another was with the domestic group 5548. In 5757, where the head end of the grave was not disturbed at all, was a small round flat-sided igneous pebble. Doubtless the little stones were used as polishers, possibly of pottery. The red ochre may have been for colouring the vases.

Porphyry Palettes. A pair of these had been placed together in a basket with the domestic group 5548 (see Section 13). They are well-made flat rectangular slabs with rounded corners; one measures 7×5 ins., the other $9\frac{1}{2} \times 5$ ins. There was also a grinding pebble of flint with them. The nearest parallel to these slabs are the Nubian palettes (REISNER, *Arch. Survey of Nubia*, 1907-8, pl. lxiii c); but these are all Protodynastic. None has, so far, been found which can be dated to the Predynastic period.

Selenite occurred in the form of a large slab in grave 569, with the beaker and four-handled pot (pl. xxvi, bottom left). There were faint traces of wood round it, and it has been suggested that it was used as a mirror. In 5105 was a small natural flake of selenite or mica. There are no Predynastic mirrors known, so far; but Professor Petrie suggests that wetted slate may have been used (*Objects of Daily Use*, p. 28). A slab of mica, possibly a mirror, in the Aswan Museum (F.152) is of the B-Group period.

Calcite, in crystalline form, was found in 5728.

Resin, in small scraps, lay with a little group of four *Oliva* shells, a pierced piece of branch coral, and a flint pebble with a natural hole. Possibly there had been a pendant made of the resin, and all these were from a rough necklace.

CHAPTER VIII

THE BADARIAN FLINT IMPLEMENTS

73. NEXT to the pottery, the flint-work of the Badarians has aroused most discussion. Miss Caton-Thompson is dealing with the technicalities of this subject, and it is left for me to record the circumstances under which the various implements were discovered in the cemeteries and villages at Badari. With few exceptions, all the tools are photographed, as well as some of the flakes and cores, generally in groups (pls. xx, xxvi-xxix, and

2015, pl. lvii, 2). Three are drawn (pl. lvi, 1-3).

Those implements which are carefully finished are: (i) arrowheads, generally winged or barbed, but sometimes tanged; (ii) saw-edged knives, serrated on one side, rarely on both; (iii) a variety of forms, knives, adzes, lance-heads, all of which are rare. In addition to these implements there are the very rough flints, the innumerable flakes, and the cores. Many flakes and even some cores were placed in the graves; it is difficult to imagine what purpose they could serve; but they evidently had their value for the deceased.

Winged Arrow-heads. Twenty-four of these were found, fourteen being from graves and ten from village rubbish or loose in cemeteries. All the graves were plundered except one (5725), and it might be argued from this that the poorer people did not possess them. In two graves only could we tell the sex, both males (5715, 5744). One Predynastic grave, 3920, rather uncertainly dated to S.D. 73-79, was of a male, and untouched; it contained an arrow-head (pl. xxix, 3). The pots, very rough deep bowls, may be earlier, or the arrow-head may be re-used, or even accidental. The arrow-heads were always single, except in graves 5120 and 5744, which contained a couple each.

As will be seen from the photographs, the types vary considerably. The outline may be squat and rounded, as 3920 (pl. xxix, 3), or long and narrow, as 5148 (pl. xxix, 6). The angle between the wings may be wide and curved, as 1700 (pl. xxix, 3), or narrower and pointed, as 5715 (pl. xxix, 5). The wings may have square tips (5100, pl. xxix, 6) or pointed tips (1700, pl. xxix, 3), be wide (5470, pl. xxix, 5) or narrow (1700, pl. xxix, 3). A specialised type with long and particularly straight wings is 3000/6 (pl. xxix, 3) from an Early Predynastic village; such arrow-heads are not found on our Badarian sites. For the Hemamieh arrow-heads, see pls. lxxiv, lxxix, and lxxxiii. One of them has the long straight wings.

Winged arrow-heads have been found in great abundance in the Fayum (CURRELLY, *Cairo Catalogue of Flints*); they have also appeared occasionally on other Egyptian and Nubian sites (PETRIE and QUIBELL, *Naqada*, pl. lxxii, 55, 57, 58, p. 56; GARSTANG, *Maḥasna*, pls. iii, iv, p. 7; REISNER, *Arch. Survey of Nubia*, 1907-8, pl. lxii, b16, grave 1750; QUIBELL, *Hierakonpolis I*, pl. xxiv, 12, 12a, p. 8; DE MORGAN, *Origines*, figs. 189 (Dimeh), 199 (Tukh, Naqada), 200 (Abydos), 201 (Khattarah).

See also QUIBELL, *Archaic Objects*, pl. lxiii; ORIC BATES, *Eastern Libyans*, pl. viii; REISNER, *Boston Museum Bulletin*, xix, April-June 1921, nos. 112-13.

Only a few are dated. The Maḥasnah examples come from the Early Predynastic settlement (one in the Pitt Rivers Museum, Oxford); the Nubian example with long straight wings is from grave 17.50 of s.d. 37 (now in Aswan Museum, C.28); and there are clay models with the Badarian slate from grave 209 at Maḥasnah of s.d. 31-34 (pl. iii). One of these latter has the long straight wings. There is therefore a connexion with the Early Pre-dynastic (Amratian) period.

It will be noticed that while the long straight-winged type is confined to the Early Predynastic period, the rounded forms begin as early as the Badarian and run on well into the Predynastic age. Unfortunately we have insufficient material to form a sequence of the forms. Scarcely any are with pottery that can be classified. The arrow from 5112 (pl. xxix, 6) should be of an early type, if the pottery is as early in the series as it appears. On the other hand, 5406 (pl. xxix, 5) should be a late example.

74. *Tanged Arrow-heads*. These are usual in the Fayum, but are not found at Badari, with the exception of 5400 (pl. xxix, 5), which is of unusual form. The Predynastic imitation 3000/16 (pl. xxix, 3) may be noted here. There is a dated example of s.d. 37 from Nubia (grave 17.78, REISNER, *Arch. Survey of Nubia*, 1907-8, pl. lxii, a3, b3), and another of s.d. 43-56 from grave 1856 (*Naqada*, pl. lxxiii, 69, p. 56). There are also elaborate examples of the 1st dyn. (PETRIE, *Royal Tombs II*, pls. iv, vi), and one re-used in the xviiith dyn. at Abydos (MACIVER, *El Amrah*, pl. xlviii, p. 89). Many others from Abydos are figured by DE MORGAN, *Origines*, figs. 202-225. Little tanged arrow-heads of carnelian are used as amulets in the Sudan at the present day (Wellcome Historical Medical Museum).

Celts. A ground stone axe-head of hard grey igneous stone was picked up loose in Cemetery 1100 at Qau; there was nothing by which to date it (pl. lvi, 3). In one of the deposits of rough flints at Badari (5451) there was another, of brown flint, either re-worked by chipping round the edges, or else damaged. With it was a regular Badarian saw-edged knife. Others came from the Predynastic village area 3200 (pl. liv, 7), and from the Badarian Cemetery 5200.

Closely dated celts are very rare. One was found

in a basket in grave 1410 at Naqada of s.d. 36-44 (PETRIE and QUIBELL, *Naqada*, pl. lxxii, 59, p. 28). A rather different type is of s.d. 60 (MACIVER, *El Amrah*, grave a96, pl. vii, 1, p. 19). Several come from villages; at Maḥasnah they are Early Predynastic (GARSTANG, *Maḥasna*, pl. v, p. 6); at Ballas they are Predynastic (PETRIE and QUIBELL, *Naqada*, p. 2); in Nubia they are Late Predynastic or B-Group (REISNER and FIRTH, *Arch. Survey of Nubia*, 1907-8, pl. lxiii d, from camps 24.9, 41.305, etc., and from graves 7.230 and 234; 1908-9, pl. xxxviii, b4, from grave 92.93); or even C-Group (re-used?) (*ibid.*, 1909-10, p. 134, grave 101.412). Another of B-Group date is from El Kubanieh (JUNKER, *El-Kubanieh*, p. 115). The date-range, then, covers the whole Predynastic period, and extends both before and after.

Undated celts are found in the Fayum; one of jade comes from the Selima Oasis (Cairo Museum, 45387); haematite examples come from Sais (?) (QUIBELL, *Archaic Objects*, p. 234, 14252, 14254; DE MORGAN, *Origines*, figs. 85, 87, p. 99); diorite from El Kab and Gebelein (*Archaic Objects*, p. 234, 14248, 14250); hard greenish stone from Hamrah Dom, opposite Naqada (*ibid.*, 14245); serpentine (*ibid.*, 14247; *Origines*, fig. 84, p. 98); and diorite (*ibid.*, 14243, 14246; *Origines*, figs. 86, 88, p. 99). All these and others are in the Cairo Museum. At Aswan are many of the B-Group from Nubia. And many are at University College (*Prehistoric Egypt*, pl. xxvii, p. 53), of unknown provenance except one from Quft, no. 12. For others, see PETRIE, *Koptos*, pl. ii, 7-12, p. 4.

The stone celt seems to be an imported implement in Egypt; it is more commonly found in Nubia, where natural flint is not available. The Badarian seems to have tried his hand at re-chipping celts, but not very successfully.

Like the tanged arrow-heads, model celts are used as charms. This is for protection against lightning in various countries such as South Italy, Malta, and Japan (Pitt Rivers Museum). A model celt (?) in serpentine was found in the Protodynastic grave 430A at Qau (*Qau and Badari I*, pl. xvii, 89₃). For other details, see PETRIE, *Amulets*, p. 28; pl. xv, 123b-d.

75. *Saw-edged Knives*. Of these we found six in graves, and ten in deposits, of which nine were together. They are all photographed (pls. xx, 16; xxvi; xxvii, 2, 4; xxviii, 2, 3; xxix, 2, 4). In length, they vary from 7 ins. to just over 2 ins.

The serrations vary in coarseness, and are on one edge only which is always curved, especially near the tip. One example, 5120 (pl. xxvi), is finely serrated on both edges, belonging to a different category of implements, and may be called a dagger. All are pointed at the top; most are ended off square at the butt, which varies much in width, the shortest saws being, in proportion, the widest at the butt. Two are pointed at each end (pls. xxviii, 2 and xxix, 4). Many of the Predynastic sickle flints have both ends squared; none such was found on Badarian sites.

Parallels to these, which are dated, come from Nubia, grave 17-56, which by its similarity with the adjoining graves must be of about S.D. 37 (REISNER, *Arch. Survey of Nubia*, 1907-8, pl. lxii, b24-6).

Other Forms. Knives of various types were found sporadically. There are two fine long oval knives, one over 8 ins. long, pointed at both ends, from 569 (pl. xxvi), the other, about the same length, with one end squared but otherwise similar, from 5739 (pl. xx, 16). Rough knives are two from 5814 (pl. xxviii, 5), and a large almost square-ended one from 2015 (pl. lvii, 2). Two are nicked for hafting, the very rough 5410 (pl. xxviii, 3) and the well-worked 5814 with delicately chipped edge (pl. xxviii, 5).

The long lance-head or dagger 5391 (pl. xxviii, 3) is most like the dagger 5120 (pl. xxvi), but is smaller and narrower. A similar form is pl. lvii, 4, from Area 1700 at Hemamieh. The adze-like type from 5400, with its rounded top (pl. xxviii, 6), looks strangely out of place here. Part of an implement which was perhaps of similar form is shown in pl. xxviii, 3 (5459). Alongside the adze from 5400 is a tool which is like the smaller of the saw-edged knives from the large group 5773; but this one is not serrated. The two small flint rods in pl. xxviii, 4, are probably wings of arrow-heads which have been broken off.

The finest examples of flint-work from Badari are the set of five little leaf-shaped implements in pale translucent flint. Four are pointed at each end; one has a flat base. All are finely notched all round (pl. xxix, 6). A usual arrow-head (shown to the left in the photograph) was found with them. They may be models of the large knives referred to above. Another little leaf-shaped flint comes from 5500 (pl. xxix, 5). It is, however, of much coarser workmanship, and thicker in the body.

In the centre of the photograph, pl. xxviii, 6, is

a curious rough implement of hard grey flinty stone from the village area of 5400. Another came from a group of very large rough flints and cores (6017). They bear some resemblance to the bone flint-working tools in pl. xxix, 2. See Section 69.

A few long narrow flakes of clear quartz crystal came from the filling of a xixth dyn. tomb (5550). This was in an area of Badarian village rubbish, and the flakes are probably of that date. A collection of broken lumps of smoky quartz from Area 5700 indicates an attempt to work this difficult material.

76. *Flint flakes* were found in abundance; this suggests that chipping was certainly done locally, as would be expected. The presence of flakes in so many graves, however, implies that they had their uses, and were not merely waste. In some cases they may have been regarded as models of full-sized implements. Many from graves are photographed: 5120, pl. xxvi; 5389, pl. xxviii, 3; 5390, pl. xxvii, 1; 5401, pl. xxviii, 3; 5406, pl. xxix, 5; 5705, pl. xxvii, 4; 5738, pl. xxvii, 1; 5739, pl. xx, 16; 5744, pl. xxvii, 5. Others from deposits are 5118, pl. xxvii, 2; 5814, pl. xxviii, 5; 5300, 5400, pl. xxviii, 6; 5500, 5600, pl. xxviii, 4; 5600, 5700, pl. xxviii, 2. We find numbers of flakes varying from one to ten in graves, and also the cores from which they were struck (5387, 5401, pl. xxviii, 3; 5719, pl. xxvii, 6; 5744, pl. xxvii, 5). The number of the extremely rough lumps of flint deposited in groups, in holes in the ground, is remarkable. These might be in cemetery or village ground; 5206 had 19 pieces; 5213 had 22 (pl. xxix, 1), with a shell hook, animal bones, and Badarian sherds; 5451 had many rough flints and pieces of chalcedony, a saw knife, celt, bone tool, animal bone, and pottery cup; 5527, a small group, all rough (pl. xxviii, 1); 5773 contained nine good saw knives, a long rib needle, and a flat piece of grit-stone; 5814 consisted of three rough knives, two flakes, and two cores (pl. xxviii, 5); and 6017 had many huge rough flints, and a hard stone flaking (?) implement.

When noting the occurrences of flints in graves, a point of some interest emerges. Eleven of the graves where the sex could be determined were of males. Two were of immature persons. Two were doubtfully of females, but might, from the nature of their belongings, equally well have been of males. If this were so, then we have no examples at all of flints in female graves, a point of some importance with regard to social conditions.

CHAPTER IX

IDENTIFICATIONS OF BADARIAN SPECIMENS

77. *Quadrupeds*. Grave 5434 (pl. x, 6). The skull was too crushed to permit of removal, though the jaws and teeth were able to be preserved. Professor D. M. S. Watson states that it is plainly an ox, but that it is impossible to say much more. He adds: "It appears to be a remarkably big-horned animal. The horn is very materially bigger than any I remember from later Egyptian dynasties, indeed I am not certain that it may not be a cow-buffalo." The natives who cleared the grave declared it to be a buffalo, probably judging more from the size than from any anatomical details. Predynastic oxen are sometimes shown with horns curving downward (PETRIE, *Prehistoric Egypt*, p. 11). The animal is probably the same as that painted on the cross-lined pot pl. xxxviii, C49k. Cp. AYRTON, *El Mahasnah*, pl. xiv, 3.

Grave 5423. Professor Watson, who has examined the skull, says that this is probably a sheep.

Birds. Grave 5754. Dr. Carpenter and Professor Hickson have identified the feathers as "ostrich, almost certainly, or some bird of the ostrich family."

78. *Shells*. The following have been identified by Mr. Wilfred Jackson, M.Sc., who has appended the present habitat:

Aetheria elliptica (Lam.). 5700. Nile.

Ancillaria cinnamomea (Lam.). 5807 (many), 5425 (5), 5300 (6), 5407 (many), 5722, 5717, 5364, 5700. Red Sea.

Cerithium caeruleum (Sowb.). 5364.

Conus sp. 5761 (many young).

minimus (L.). 5364. Indo-Pacific.

quercinus (Hwass.). 5755. Red Sea.

Dentalium sp. 5807 (5), 5733 (shell rings).

Mitra litterata (Lam.). 5425 (10), 5761 (4), 5300 (4).

Mutela dubia (Gmelin). 5500 (one broken valve), 5700. Nile.

Natica mamilla (L.). 5763, 5733, 5364. Red Sea.

melanostoma (Gmelin). 5364. Gulf of Suez. sp. 5722.

Nerita albicilla (L.). 5807 (two young), 5733. Indo-Pacific.

polita (L.). 5425 (1), 5300 (2), 5708, 5700, 5364. sp. 5741 (1). Gulf of Akaba.

Oliva inflata (Lam.). 5300 (? young), 5364, 5700, 5733. Gulf of Suez.

Purpura (Thalessa) tumulosa (Reeve). 5428 (1).

Spatha rubens (Lam.). 5300 (right valve), 5428 (left valve), 5700.

Terebra sp. 5444 (1 much worn).

Major Tomlin, of the Natural History Museum, South Kensington, has identified the following:

Conus sp. 5737.

Cymatium pyrum. 5705.

rubecola. 5705.

Dentalium octogonatum (Donovan) (?). 5740.

Polinices mamilla (L.). 5737.

79. *Botanical Specimens*. Some examination of organic material from Cemetery 5100 has been made at the Royal Botanic Gardens, Kew. One sample consists of leaves mixed with resin, but cannot be further identified. Two pieces of wood are apparently *Tamarix* sp.

Mahmud Abaza Bey, Director of the Horticultural Section of the Egyptian Ministry of Agriculture, has very kindly sent me the following notes on botanical specimens submitted to him from grave 5112. These are "Castor seeds (*Ricinus communis*). The seeds are similar in size to those of the wild plants now growing in Egypt, but are smaller than those of the cultivated varieties. Fresh castor seeds have smooth testas with black marks, but the samples sent have lost their colour and polish. The testa, however, has remained hard and brittle. The caruncle, endosperm, and embryo have disappeared in most cases, but in a few seeds the remains of the endosperm and embryo are seen as dry shrivelled yellowish masses."

Textiles and Basketry. Mr. Midgley's report on the Badarian and Predynastic specimens is given in Chapter XX.

CHAPTER X

SUMMARY OF THE BADARIAN PERIOD

80. THE first question to be decided is the date of the Badarian cemeteries in relation to the known periods of Egyptian history. The evidence afforded by Miss Caton-Thompson's work at Hemamieh is as clear as the evidence from any village site can be; it need not be mentioned further here, as it is fully given in the excavator's own report.

We need, I think, be in no two minds about the essentially Predynastic character of the Badarian civilization. The only other culture so far found in Egypt which is comparable with it is that of the "Pan-grave" people. But the pottery is essentially different both in its wares and manufacture; and

the Pan graves have abundance of beads of blue glazed frit, which are entirely absent from the Badarian. If it be granted that we have here a civilisation which is akin to the Predynastic, the question, then, to consider is, how are we to place it in relation to that age? In other words, is it previous, contemporary, or later?

It is almost impossible to imagine that the two peoples could have lived side by side in the same district without borrowing some at least of each other's products. This is especially noticeable with regard to the pottery. No true Predynastic pot (with the four exceptions stated in Section 54) is found in a Badarian grave; and no ripple-surfaced or other Badarian pot is ever found in the Predynastic cemeteries of the neighbourhood. That great quantities of such different styles of pottery for ordinary use should be made in the same locality by different peoples and kept entirely distinct by its users, is incredible. The later Pan-people certainly brought in styles of their own; but Egyptian pottery is found mixed with it. Ruling out, then, the possibility of these Badarian graves being contemporary with the Predynastic, we must consider them to be later or earlier. The evidence is overwhelming that they were earlier.

81. The curious feature of the notches in the Badarian slate palettes is very characteristic. One such was found in an Early Predynastic grave at Maḥasnah.

The use of matting, which is almost universal in Badarian graves, is also common in Early Predynastic times (see Section 110), but gradually dies out after that.

The so-called "carinated" bowls of red polished pottery are confined to the Early Predynastic period. This form is also found in the Badarian rippled ware.

The Badarian pottery is mainly black-topped; what seems to be the earliest is black for a long way down the vase. In Predynastic times the black-topped rims are common early, and disappear entirely later.

Such Badarian decoration as we have, the palm branches and the dots, can be paralleled only in Early Predynastic (Amratian). The black pottery incised with white is another rather early feature.

As to form, the large cooking-pots are common in Early Predynastic villages; the red polished cup is found in the cross-lined pottery; oval pots are both Badarian and Early Predynastic (Amratian); while the absence of everted lips points in the same

direction. The four Predynastic pots found on Badarian sites are all of the Early Predynastic period, or begin their time-range then.

There are no pot-marks, though they are frequently found later from the Amratian period onwards.

Beads of faience or glazed frit are not found in the Badarian graves, but are usual in every other period in Egypt.

The Badarian flint-work is generally distinct from the Predynastic in the absence of the long flaking which is so common later. The arrow-heads, however, are found at s.d. 37, both tanged and winged, with clay models at s.d. 31-34; and the saw-edged knives can also be dated to s.d. 37. None of these forms has been dated later. The polished celts, too, are found at s.d. 36-44, though they also occur later.

Many other details call to mind the Early Predynastic or Amratian period. Such are the use of basalt for vases; the splay foot for stone and ivory vessels; the ivory cylinder vases; the human figures, especially those which tend to steatopygy; the large ivory bracelets; the long-toothed combs; malachite, but no galena; the red paint on the slate palettes; the palettes without holes for suspension; the needle in its bone case; the many bone awls and pierced disks of pottery, so common in all the earliest villages; the ivory tusks; and the use of skins for wrappings.

There are a few details which point to a later date. Other statuettes with folded arms are Protodynastic; there are no Early Predynastic spoons, though they are common later, and square bowls are only known of the 1st dyn.; bone needles and palettes of igneous stone are otherwise only known of the B-Group; the four-handled pot is akin to a 1st-dyn. non-Egyptian form; and rippled pottery occurs in certain Protodynastic graves. This latter, however, is quite distinct from the Badarian; and the above details weigh very little against the evidence adduced above.

There can be no question that the Badarian culture in very many of its manifestations is akin to the Amratian or Early Predynastic. That it was contemporary seems impossible. It must therefore have preceded it.

82. It is difficult to say what time elapsed between the Badarian age and the Amratian or Early Predynastic. There is no definite evidence of any marked space of time between the two occupations

of the village site near Hemamieh. The pottery forms of both cultures overlap to some extent, and the style of surface finishing shows an even development with no abrupt change. Even the slate palettes of the Badarians, which are so distinctive, are found in Early Predynastic graves. That there was a break of some kind may be argued from the fact that the Badarian and the Predynastic cemeteries seem always to be on separate ground. In Cemetery 100 at Qau there is Early, Middle, and Late Predynastic, while the Badarian is under the cliffs a couple of miles to the north. At Badari, the Predynastic cemeteries are also a mile or two from the Badarian, but in this case there are practically no Early Predynastic graves at all. At Hemamieh there are burials of all the Predynastic periods, and also one or two Badarian; but these latter are in the area to the north of the *wadi* where there are Predynastic village remains, but no cemetery. On the whole, the indications seem to point to a short lapse of time between the two ages. Either the Badarians died out, or, as seems more likely, they were dispossessed by a tribe or tribes who were practically of the same blood, but slightly more adventurous and progressive. Judging from the scanty remains that we have of the Badarians, they seem to have been a very peaceful people. There is a considerable proportion of long-lived individuals among the burials; there are no examples of broken bones or injuries; and we find no warlike weapons such as the disk-mace which is characteristic of the Early Predynastics.

The Badarian culture appears to have developed, or rather degenerated further, in Nubia, where it was much less affected by foreign influences. Many of the Early Predynastic parallels to Badarian objects, especially flints, bone awls, and the like, are found in Nubia. The rippled surfaces to the pottery vases in a modified form continued on there till much later periods. Most striking of all are the pottery forms; the bowl, which is by far the commonest Badarian shape, is also very usual in Nubia, where it persisted for many centuries.

83. We are now in a position to visualize to some extent the activities of a Badarian community. The climate in those days seems to have been colder than it is now, if we may judge from the amount of fur worn; sometimes we find two skin garments; and the hair is nearly always on the inside for warmth. The Nile Valley was largely occupied by swamps, evidenced by the profusion of

rush or reed matting; the fact that villages were placed on the desert spurs also indicates that there was not overmuch habitable land on the lower levels. Hippopotami and crocodiles abounded. The fauna of the desert was probably much the same as it was in early historic times; it included the ostrich. No doubt there was much more vegetation then than now, and there is a possibility that the Badarian cattle may have found pasture in what is now desert. Remains of rough stone walls on the high desert near the great *wadi* may be parts of fences or cattle enclosures. It seems most likely that we are to connect this wet period in Egypt with the third Bühl advance in the Alps.

We do not know what kind of house or shelter the Badarian made for himself. We may imagine that wattle was the mainstay of the walls; it may have been covered with mud, skins, or matting. We found no hut circles in the Badarian villages; huts were probably therefore more in the nature of shelters. If we can take the graves as imitations of living habitations, then sticks and matting would have been the materials used. No wonder the Badarians slept in fur.

84. Their clothing was of woven material, probably a coarse linen, in addition to the skins. This took the form of a kilt, or of a longer garment. As at the present day, the head was well wrapped up at night, if we may take the burial garments as being those worn by the living during sleep. Over the linen, when occasion demanded, the skin garments were worn, sometimes sewn, sometimes with leather fringes, sometimes a single pelt; but they were never ornamented with patterns in beads. Goat and antelope seem to have furnished the majority of these; but finer fur, like a black cat's, might be worn on occasions. These skin garments were more usual with men than with women; doubtless they required more protection when out hunting and cattle-tending than the more sheltered wives. The Badarian does not seem to have made himself sandals.

Like most primitive Africans, he was fond of ornaments in the shape of necklaces, bracelets, and anklets. Men affected the single large bead at the neck or on the arm; and, when they could afford the luxury, wore ropes of greenish blue beads round the waist. Women and children had necklaces of beads and shells, and young girls liked girdles and head-bands of shells. Both sexes were

fond of large ivory bracelets which were worn in numbers on the forearm. Ear-studs seem to have been usual ornaments; and even a pale-green nose-stud was thought attractive, a very African touch. We may not be far wrong if we suppose that the Badarians were sufficiently civilised to carry handkerchiefs.

The eyes were painted round with green malachite ointment; everyone ground and mixed his own. The castor plant, which grew wild, supplied them with oil to lubricate their skins, or to fill their lamps. Men wore their hair long, according to modern European ideas; women sometimes plaited theirs, or twisted the tresses, or even had curly fringes; but they never grew it longer than eight inches or so. Combs were worn as ornaments. The men were clean-shaven, or beardless.

85. There was no scarcity of food; apart from herds of oxen, sheep, and goats which we may suppose to have been domesticated, game abounded; birds and fish were also plentiful. The crocodile was made use of, though we cannot say that it was eaten. Cereals were known, but what species is uncertain. Husks were found with the deposit of saw-edged flints (5773), and also in one of the cooking-pots (5600). The grain was perhaps pulled up, as the usual Predynastic sickle-flints are not found, and the saw-edged knives would not be very suitable for reaping. The grain was stored in clay bins; and made into bread, apparent remains of which are found in graves (5709, 5738). Porridge no doubt was a common form of food, and was ladled out of the pots with large dippers or spoons, which could be carried hung from the belt.

In hunting, arrows with flint heads were the common weapons. We have no information at present as to how they were projected; no bows have been found. If they existed, they have either left no trace in the graves, or, as is more likely, they were considered too valuable to be buried. Of other weapons we know little; we can only guess at the uses to which the flint implements were put. As there are no fish-hooks, for certain, we conclude that fish were caught by means of nets only.

86. The principal industries were pot-making, flint chipping, tanning, weaving, basket- and mat-making. It was in the manufacture of pottery that the Badarian especially excelled. Not only was it made in great quantities, but the finer qualities were never equalled in later times in the Nile Valley.

The best vases are extraordinary for the thinness and excellence of the ware, and for the high finish of the delicately rippled or smooth surfaces. The forms, perhaps, show some want of imagination; but this sameness is more apparent than real, as most of our examples come from the graves. The scraps gleaned from the village rubbish show us a variety of very different shapes. We cannot say whether the men or the women were the potters; probably the men. It was the men, undoubtedly, who were both the flint workers and flint users.

The methods of basket- and mat-making were probably much the same as those of the present day. Mr. Midgley in Chapter XX has reported on the linen; the weaving was quite as advanced as that of the Predynastic people, and shows a well-developed technique. In all these activities there is nothing to suggest a primitive people just struggling out of barbarism.

Leather-work was carried on with considerable skill. For softening the hides, we can see the Badarians using some of the many hard stone rubbers which are so often found. The bone awls were for piercing the leather; and the sewing was done with bone needles. Copper borers were also much prized for some such purpose, or perhaps for the piercing of the steatite beads, if these were made locally and not imported.

87. Of trade we have ample evidence. It is a matter of dispute from what neighbouring lands certain materials and objects come; but it is quite certain that they were not found or manufactured locally. The basalt vases were probably traded up the river from the Delta region or from the north-west. Elephant ivory may have been local, but was more likely imported from the south. Shells came in quantities from the Red Sea shores. Turquoise possibly came from Sinai; copper from the north. A Syrian connexion is suggested for the four-handled pot of hard pink ware. The black pottery, with white incised designs, may have come directly from the west, or indirectly from the south; and the celts suggest intercourse in the same directions. The porphyry slabs are like the later ones in Nubia, but the material could have come from the Red Sea mountains. The glazed steatite beads, found in such profusion, can hardly have been made locally. We see, then, that the Badarians were not an isolated tribe, but were in contact with the cultures of countries on all sides of them. Nor were they nomads; their pots, some of them both

large and fragile, were absolutely unsuitable for the use of wanderers.

Trade connexions need not necessarily affect race. But the variation in the physical features of these people, such as the stature, hair, and facial outline, imply that they were affected to some degree by actual racial admixture.

88. With our present limited knowledge, there is little that can be said as to the social institutions of the Badarians. The very distinct segregation of some of the males in a part of a cemetery, taken in conjunction with the fact that, close by, the females were buried together with males, may be explained if we suppose that these separated males were the unmarried members of the community. If this be so, it implies that men were in the majority, or that the women were monopolised by the more influential males.

Of the every-day religion of the Badarians we know very little. That they had a belief in the efficacy of amulets we know from the animals' heads found on the bodies; the gazelle and the hippopotamus had attributes which it was desired to acquire by magical means, or they were objects of veneration and could afford the wearer protection. We may infer that certain animals were revered, from the fact that their bodies are found buried in certain select areas of the cemetery and with as much care as human beings. The dog or jackal, the ox, sheep, and goat, are thus found wrapped in matting and even in linen. This burial of animals is like that of dogs, goats, oxen, and sheep found during the archaeological survey of Nubia; but these are all B-Group or later still in date. This ceremonial burial of animals may be connected with the keeping of one special cow by the Habab (MURRAY, *The Northern Beja*, in *Journ. of the Royal Anthropol. Inst.*, vol. lvii, p. 46).

89. That there was belief in survival after death is obvious from the food-offerings placed in the graves. The deceased were wrapped in their every-day clothes and laid down as if sleeping, covered by what may have been a replica of their home; and with them were placed their toilet objects and implements of craft. For some reason, it was considered desirable that they should look toward the setting sun. The purpose of placing objects with the dead was either that their spirits could pass over into the spirit-world with their owner, or, more likely, that the ghost who haunted the grave would find everything that he wanted there and

not return to his abode and trouble his family. Fear of the dead was a most primitive instinct. The belief in the actual presence of the ghost at the grave is shown by the custom of cooking and eating meals in the cemeteries. Great pots were set up in little hollows in the ground, and surrounded with tamarisk boughs or other brushwood. In them was cooked grain taken from the neighbouring bins, and meat which had been carved up with the saw-edged knives. These graveside meals were perhaps more general in the mixed portions of the cemetery than in that of the bachelors.

Cemeteries were placed to the east of the settlements, rather than to the south as in Predynastic times. It is possible that specially sacred ground was reserved for the more influential. Plundering occurred before the advent of the Early Predynastic people, in spite of the fact that the graves were comparatively close to the villages. The dislocation of the head shows that it was the necklace which was generally sought after. There are some, however, who would see in this an indication that the head was buried separately. If that is so, it has to be explained that in most of the un plundered graves the head is in position.

The Badarian cemeteries which have not been covered by the ever-advancing cultivation must be few and far between in Egypt at the present day; for in spite of the extensive tomb-robbing that is constantly going on, the dealers in antiquities, though they have much Predynastic stuff for sale, can hardly ever offer an object which can be classed as Badarian.

CHAPTER XI

THE PRE-DYNASTIC SITES

90. To the south of the great Qau bay, just past the southern horn beyond Nauwara, there is a small cemetery (Cemetery 000). We spent one day examining this. It proved to be Early Predynastic with some Late graves. We were given to understand by the natives that it had been worked out in three days by Professor Steindorff. A few objects were found, and the datable graves are recorded here.

In the centre of the Qau bay, south of Etmanieh, is a small low island of desert, with Predynastic graves of the Middle and Late periods (Cemetery 200). The site was much plundered; it had been reused for Roman graves, and the western end was

covered with village rubbish of Arab date. See general map, *Qau and Badari I*, pl. 1. The ground was very pebbly and damp.

Immediately north-east of the Coptic village which forms part of the Etmanieh group of villages was another small Predynastic cemetery (100). The graves were very shallow, and had provided a happy hunting-ground for the inhabitants of the adjoining houses. The burials were mostly Early and Middle, with a very few Late. Cemetery plan, pl. iii. The lower part of the cemetery was very damp, and probably extended further under the fields.

91. Nothing more of this age was found until the cemetery north of Hemamieh was reached. Here, although the ground had been extensively reused in later times, during the Protodynastic, Old Kingdom, First Intermediate, and Roman periods especially, there were a number of Predynastic burials of all ages, but mostly Middle. To the north of the *wadi* had been situated the corresponding town; from this we recovered some antiquities, mostly pots. They were of the Early period, running on into the beginning of the Middle. For the cemetery plans, see *Qau and Badari I*, pl. vi.

Away to the north near Badari, many of the spurs had been occupied by settlements or cemeteries (see map, pl. ii). The sites of settlements were on spurs 2, 3 (underneath the temple buildings), 4, 6, 7 (groups numbered 3100), 8 (3200), 9 (3300), 10 (3400), 11, and 12. Farther south, Area 4400 may have been a small settlement. The cemeteries were in two main groups, one on spurs 13-17 (3500-4000), belonging to the succession of villages on the northern spurs, and the other farther to the south, numbered 4600 and 4800. To the south of that again, as far as the point where the cliffs touch the cultivation, there was no Predynastic site, only Badarian.

CHAPTER XII

DETAILS OF THE PREDYNASTIC VILLAGES

92. THE Grave Register (pls. xxx-xxxiii) contains all the principal information about each village group, or burial. Certain explanations with regard to the Register are given in Chapter III, and most of them apply equally to the Predynastic remains. The shells are more closely defined in Chapter XIX. Slate palettes are either drawn, photographed, or typed from Professor Petrie's *Prehistoric Corpus*.

In the latter case, a letter forms part of the type number. A cross in the palette column implies that a rough piece of slate or a fragment only was found.

Hemamieh Village (Area 1900-2000). This area was covered with pit-tombs of various dynasties, mostly of the First Intermediate period. It had also been occupied in more modern times by a previous village of Hemamieh. The ground had been therefore thoroughly disturbed, and all stratification of the old village deposits destroyed. The amount of charcoal, sherds, and flint flakes found scattered in the soil was conclusive proof of the nature of the early site. That the settlement began in the Badarian age we know from the fact that some of the characteristic pottery was found there. See Section 8.

Certain groups of objects were discovered (see Register nos. 1900-2000, and further details below); but most of the antiquities turned up singly, unconnected with other objects. The following is a list of the pottery.

B3b₂, 11e (with potmark pl. lv, 32; s.d. 36-63), 12g (with potmark pl. lv, 53; s.d. 37?), 21b₆ (s.d. 37), 21c (s.d. 31-68), 25e (slightly rippled, s.d. 31-35), 62d₂ (two, s.d. 37), 62d₃ (s.d. 37-45), 62d₄ (s.d. 37), 62m₂ (s.d. 38-44), 76b₃ (s.d. 33-46), and 83b₃ (potmark pl. liv, 4).

Pr1a₂ (s.d. 37-45), 37d (without polish, s.d. 36-39). F27k.

R3f₈, 3f₉ (36 ins. down), 34t₂, 81k (two, 36 ins. down, s.d. 46), 81l (with emmer corn, s.d. 50-58?), 83t₄, 85c₂, and 85c₃.

A few sherds had potmarks; these are pls. liv, lv, 21, 23, 42, 43, and 56.

Miscellaneous objects are: a bead in black mottled limestone (86f₂), and another in obsidian (?) (86k₈); a scoop made from a shell; a horn ring, centre circular, edge square, like the rings in CAPART, *Primitive Art*, p. 51; the bowl of a tiny slate snuff-spoon (pl. liii, 41); a bone pin; a scrap of a turtle slate (type 14d, s.d. 35-39); a bone netting-hook (?) (pl. liv, 11), and a pottery lamp (pl. liv, 21). On pl. lvii, 6, is a photograph showing three examples of all the chief varieties of flints from this area, with a few single specimens. A black syenite (?) quern, and several grain grinders were also found.

93. The following are details of groups, supplementary to the Register, pl. xxxi.

1902. Oval hole containing a black-topped pot, right way up, covered by an inverted bowl of rough

brown pottery. It was full of clean sand, and at the bottom were two *Spatha* shells, two bodkins (pl. xxxiv, 4), and an animal bone.

1903. The grain grinder, a heavy oblong piece of black igneous rock, was not with the three pots, but above them in the rubbish. The pots might be Badarian except for B97m, which seems to be Pre-dynastic in its form.

1967. A pair of slate amulets found together (pl. lii, 21).

1994. This was the only adult of a very early period found buried in this area. He may quite well be a Badarian, like 1992. He was tightly contracted.

2063. Child burial in a pot, which was placed upright in the ground. With the bones were a few carnelian beads; and beside the pot was the little alabaster vase pl. li, 3.

2064. A similar burial of a small child in a pot. With it were a black-and-white limestone disk mace-head, a disk of pottery, a scrap of ivory tusk, and a flint flake.

2065. The large rough pot R82f was lying on its side, and all the other eight black-topped pots were stacked inside it.

2074. Another stack of twelve pots, including two cross-lined.

2075. A third stack of fourteen pots.

2078. A black-topped pot with five awls made from birds' bones.

2085. Stack of eight pots, all black-topped.

2089. Two pots, side by side, both inverted.

2091. Pot R34t covered pot R83t₃, which was empty.

94. *The Badari Villages.* The objects from these settlements, when in groups, are given special numbers; when single, they are either given the area number, 3200, etc., or else the number 3000 followed by the spur number (as 3000/6, etc.).

Spur 2. A single black-topped pot B75a₂, and a flint arrow-head.

Spur 3. It was on this spur that the little brick temple of the xviiith and earlier dynasties was discovered. The various superimposed walls covered much of the ground, and we were therefore only able to examine the lowest layers in a few parts. The greatest depth of village deposit was 5 ft.; this was under the western part of the xviiith dyn. enclosure wall. It was homogeneous right through, showing no stratification, and was full of charcoal, chopped straw (*tibn*), and organic matter generally.

The pots found were always on *gebel*, except one, which was 30 ins. higher.

Certain mud-plaster floors were encountered, as shown in the plan, *Qau and Badari I*, pl. xxiii. These floors were bounded, in places, by what can only be described as a low wall; the mud floor curved upward until it became vertical for a few inches. We could not expose sufficient of these floors to determine the area of any particular room or hut; but it may be presumed that the floors were circular like those on spur 11, and like those found by Miss Caton-Thompson north of Hemamieh; they were also bounded by a low footwall in the same way. Parts of wooden stakes were found which there is good reason to believe had formed part of the upper walls of these huts; they were almost certainly of wattle and daub. In one part, where the floor was sunk in the rubbish, the wall on the south, which acted as a sort of revetment, was built of small rough stones, mud-plastered. On pl. lviii, 1, a photograph shows this stone wall on the left; it is continued in plain mud-plaster, turning at right angles towards the basket. Then comes a gap which was probably an entrance to the room, followed by more mud wall which curves round to the left again. The door was on the west side of the hut. The second photograph, pl. lviii, is a view of the same mud wall from the outside or west, showing the doorway quite clearly. Just to the left of it is a round hollow lined with mud-plaster, of unknown use.

Further to the west were more stretches of mud floor, and a pot was here found standing mouth downward (photograph, pl. lviii, 3). Away to the north, just under the northern brick boundary-wall of the temple, was another small patch of floor and foot-wall of plaster, forming a round hollow, something like that in photograph 2.

From the Predynastic deposits of rubbish came various domestic objects. The pots were sometimes single, sometimes in groups. Single pots are R22a, 45a₂ (photograph, pl. lviii, 2), 81h (high in rubbish), and T3 (pls. xliv, xlvii, 1); this last contained a number of flint flakes.

Groups of pots were:

(i) Nine, types B25h, 57a₃, 62b₃, P64h (for contents see Chapter XIX), R81v₂, 81v₃, 85s (two), and T12 (pls. xlvi, xlvii, 2). Sequence date of group 37-46.

(ii) Three, types B19k₂, 25e₂, R85c₂. The second was inside the third, both inverted. S.D. about 44-45.

(iii) Two, bowl C18n on top of B62a₅, both inverted. S.D. 31-37.

(iv) Two, types R22a and 40m.

(v) Two, types B19k and 75b. S.D. 31-37.

(vi) Four, types B62d₃, P34e₃, R85s, T4 (pl. xlv). S.D. 37-46.

All these groups come from the area between the two western boundary walls, except (iv), which was under the first hall or court.

Some of the other antiquities are shown together on pl. lviii, 6. They are: limestone whorl, cut with facets; two pierced pottery disks (one only shown); bone awl; bone piercer; two copper pins, thick and thin; decorated sherd with man holding staff (pl. liv, 14); lump of malachite; copper nugget; five oval plaques of friable yellow sandstone (one shown); pear mace-head of glazed quartz; and half a large pierced disk of polished red pottery. On pl. xxix, 3, are shown parts of two flint arrow-heads of the long narrow type. The two birds are of later date, and described in *Q. and B. I.*

Not photographed are: scrap of pottery bowl with pink-buff decoration on purple-brown; decorated sherd (from a pot with ship?) showing the common little zigzags; a sherd with a potmark (pl. lv, 22), sherd used as a spoon and pierced; several limestone spindle-whorls; disk mace-head; part of a slate palette(?); a little rectangular slab of alabaster (inlay?); pieces of ostrich egg-shell; some fragments of copper showing a small spout and traces of rivets; and the flint pl. lvii, 4.

95. *Spur 4*. There was only a thin layer of village debris here. It contained flint flakes, a saw-edged flint, shells, a sherd of decorated pottery with spirals, a large bin of pottery 32 ins. in diameter, a scrap of ostrich egg-shell, and a black-topped pot, B21m₂. There was also an infant's burial in an upright Predynastic pot.

3002. A group of two pots, P1t₃, with a potmark (pl. lv, 51), inverted over C17n. S.D. 34.

Spur 6 showed remains of settlements, mostly disturbed by tombs of the Protodynastic, Old Kingdom, and First Intermediate periods. The finds consist mainly of pottery. The types that could be identified are: B58h, P24n (S.D. 57-58), 75p, C42f, R3f₇, 3f₁₃, the large pots T9 (pls. xlv, xlvii, 1; for contents, see Chapter XIX), and T10 (pls. xlvii, 1, containing a scrap of basket), and the potlet (pls. liv, 17; lviii, 5). There were also, among the sherds, a piece of a decorated pot with tubular handles,

D63d, and a fragment of a vase with ledge inside the rim and with a palm decoration in white on red.

Smaller objects in pottery or clay are an ear(?)stud in grey clay, a clay model boat (pls. liv, 19; lviii, 5), part of a small steatopygous figure of a female in black clay (pls. liii, 46; lviii, 5), and two pierced pottery disks (pl. lviii, 5).

Several bars of pottery, burnt bright red, some 15 ins. long, 3 ins. high, and 3 ins. wide, hemicylindrical in shape, flat at the bottom and rounded along the upper side, come from pottery or grain-parching kilns. See PETRIE, *Nagada*, p. 2; GARSTANG, *Maḥasna*, p. 7, pl. iii; PEET, *Cemeteries of Abydos II*, p. 7; *III*, p. 1. Some similar pottery bars had been put to a secondary use as the coping of brick walls of Protodynastic date in the temple area (see *Q. and B. I*, Section 52).

Objects of stone are: a cylindrical vase of basalt (pl. li, 9); a breccia spindle-whorl (pl. lviii, 5); a quern or mortar of hard grey stone; a thick oval rubber of black and white porphyry, 3 ins. long; a thin flat oval rubber(?) of alabaster, 3 ins. long; two small pieces of worked slate; and two pieces of mineralised bone, like those from the great deposits at Qau, not yet published (pl. lviii, 5, right).

Flint implements are a knife (pl. lvii, 4), much like the Badarian knife (5120, pl. xxvi); an arrow point and wing(?) (pl. lviii, 5); another long narrow arrow-head (pl. xxix, 3); and many sickle-flints, round scrapers, and flakes. Three of each of the principal types are shown in the photograph, pl. lvii, 5.

Two bone awls and a fish-spine are shown in the photograph, pl. lviii, 5.

One burial in a large pot (T5, pl. xlv) may be Predynastic, but is quite possibly Protodynastic. The pot had been covered with bricks (9 × 4 × 2 ins.), but had been disturbed, and wild bees had made their cells inside. The body was male; only one arm, ribs, spine, pelvis, and knee-caps remained; these were in position with the exception of the knee-caps.

The two large pots, referred to above (T9 and T10), were standing in position near 3165. Others are recorded in greater detail as follows.

96. 3149. Large pot, T6 (pls. xlv; xlviii, 4), 43 ins. under the surface, standing in a hole in the original *gebel*, so that its mouth was flush with the old surface. Empty.

3165. Another large pot, T7 (pls. xlv; xlvii, 2),

standing 51 ins. under present surface. It contained a great collection of miscellaneous objects, most of which are shown in the photograph, pl. xlvii, 6. The largest and most important had been the ivory tusk with human head and loop at the top for suspension. Unfortunately the greater part of this was a mass of flakes, and it was impossible to treat it in any way, buried as it was out of sight in the sand and rubbish in the dark interior of the vessel. The head is shown in the drawing, pl. liii, 16. There were eight ivory tags in two pairs, one set of three, and a single small one; also the small amuletic comb of ivory (all photographed), and a small ivory bowl (?). Of stone are the rhombic slate palette, syenite disk mace-head, two limestone spindle-whorls, and a little peg or stud of alabaster (all shown). A curious feature was a string of 26 natural flint pebbles, and a calcite pendant (photographed); a quantity of shells also were pierced for stringing, 4 *Natica*, 15 *Oliva*, and 24 *Conus* (one of each shown). In addition to these were a collection of 83 nummulites (not pierced); 3 flint flakes (shown); 7 rough little pebbles (3 shown); and pieces of wood, resin, malachite, and red ochre. See Chapter XIX. Sequence date 37-38.

Close by the pot, lying on the same level, was the large slate palette (pl. lii, 11), elaborately ornamented.

3167. Another collection of objects, similar to 3165, but much less varied. It had apparently been kept in a goat-skin bag, and was covered over by a large inverted bowl, T2 (pl. xlv); they lay at a depth of 40 ins., probably on the original surface. The group consisted of two ivory tags, the ends of which were covered with leather tied on with string; a little double bird amulet or palette; a red pebble (to the left of the slate in the photograph, pl. xlvii, 5); 5 flint flakes, 4 of them very rough; *Conus*, *Natica*, *Oliva*, *Murex*, and two other varieties of shells; and a pair of very small bones of an animal. All these are shown in the photograph. There was also a wad of brown hair.

3177. Group of seven black-topped pots, found at a depth of 76 ins. The types are B21b₂, 25c₂, 25g₂, 29e₂, 29e₃, 29e₄, 62a₅. S.D. 37-45.

3197. A grass basket (pl. lx, 12), 36 ins. deep in village refuse, containing pot P28a₂; in that pot B21d₂ containing B22c. S.D. 37-44.

3199. Burial of a small child in village rubbish, covered by a reed mat, and accompanied by four pots, two of each type R65a and 65c. S.D. 60-68.

97. *Spurs* 7, 8, 9. Very similar to spur 6, and mostly disturbed. The village deposits were much shallower and less extensive.

Area 3200. Various odds and ends were recovered from here. Two pots, one P47a, the other R75g₂ (containing remains of grain). Two sherds, one with white decoration on red (pl. liv, 13), the other decorated with the oars of a boat in dark purple on grey. Female figure in grey clay (pls. liii, 47; lviii, 5). Pink limestone tag or stopper of circular section (pls. liv, 6; lviii, 5). Limestone spindle-whorl. Part of a limestone pear-shaped mace-head. A stone celt (pls. liv, 7; lvii, 4). Copper pin, and two copper lumps (pl. lviii, 5). Two *Tridacna* (?) shells. The copper lumps here and from spur 3 indicate that copper-work was carried on locally and that tools were not necessarily traded.

Two large black-topped pots, B29e₄, were found together; they had elaborate potmarks. On one were the marks pl. lv, 37, 47, on opposite sides below the rim; on the other was the mark pl. lv, 38.

3204. This from all appearances was a regular grave, though there was no sign left of a body. Pot L16b was used as a cover for L59d, in the north-west corner of the grave. The sequence date is either 58-66 or 79-81; it is probably a late burial in a disused village site.

3223. A large pot, D74k, with incised decoration under the rim; it contained the burial of an infant. Probably s.d. 80. This was found on its side, 24 ins. down, in the filling of a iiird dyn. tomb-shaft.

3284. Large pot with two handles, 31 ins. down, placed upright (T11, pls. xlvii, 2). Pot P22b₂, placed upright, served as a lid. The contents were very numerous and some of them difficult to describe. There were four small pots (types B62b₂, R3e₂, 3e₃, 5m) and a large number of objects, photographed on pl. xlvii, 4, as follows:

Three alabaster pendants.

Ribbed ivory pendant.

Two pierced seeds or nuts.

Grooved ivory cylinder bead.

Small rhomb slate palette pierced at one end.

Disk of limestone partly pierced on both sides, one face flat.

Five ivory tags.

Copper needle, 5 ins. long, traces of cloth attaching to it.

Two bone needles, eyes broken.

Fish spine.

Two pairs of gazelle horns, young, and adult (*Gazella dorcas*).

Piece of worked horn.

Strip of horn, the broad end bent over.

Small oval lump of wood, like a dried bulb or plum.

Twelve *Conus* shells.

Twenty-two *Natica* shells.

Three *Cleopatra* shells.

Two *Nerita* shells.

One *Mutela* shell.

Six other varieties, 8 shells (three in photograph).

Three small pebbles.

There were also the following, photographed on pl. xlvii, 3 :

Two thin flint knives and 20 flint flakes.

In addition there were many objects not photographed :

Pointed piece of bone with leather (?) adhering to it.

Pointed piece of wood, as if from a model boat.

Resin.

Skin with light brown hair (cow ?).

Two lumps of leather.

Two lumps of grass fibre (?).

Three fruits or pieces of bread (?).

Eight pieces of red ochre.

Three large pebbles.

Four polishing pebbles.

Three sausage-shaped flint concretions.

Piece of calcite crystal.

The shells and other contents will be found more closely identified in Chapter XIX.

98. *Area 3300*. A few loose pots were found here, F80a, R42n₂, 65b, and 65d. On the neck of a dark red polished pot was the mark on pl. lv, 27.

3311. Pot T8 (pl. xlv) with the potmark pl. lv, 41 ; it was just under the surface, and stood on the old *gebel* level. No contents.

3313. Two Old Kingdom shaft tombs had been sunk through the mud plaster floor of a Predynastic hut. This floor was surrounded by a dwarf wall of mud, 14 ins. high, and formed a rough circle, 12 ft. in diameter. The whole was covered by 6 ins. only of sand and wash, and there was no sign of the usual village rubbish filled with charcoal.

Spur 10. Predynastic village rubbish at the west end with many intrusive, but very poor, First Intermediate tombs. We only tested this spur. It produced a dark grey sherd with incised spots, five stone grain-grinders (?), part of an arrow-head of flint (pl. xxxix, 3), two large and fine flint imple-

ments (photograph, pl. lvii, 4), and one small one.

Spur 11. We here found the remains of two Predynastic huts. One was sunk 21 ins. in the *gebel*, at its south-east side, but less on the opposite side as the spur slopes down to the west. The floor was covered with mud plaster, and was roughly circular, 108 ins. in diameter. The *gebel* face of the walls all round was revetted with mud plaster above two courses of bricks which formed a wainscot. The bricks measured $8\frac{1}{2} \times 4 \times 2\frac{1}{2}$ ins., and were laid as stretchers. The side of the hut on the east was broken by an Old Kingdom tomb. The plaster on the face of the gravel wall was 3 ins. thick. We could not tell to what height it had originally extended, but presumably the whole wall-face had been coated with it.

The second hut was more oval, 120 ins. from east to west, and 90 ins. from north to south. It had probably been sunk in *gebel*, like the other hut-circle. There was mud plaster about 1 in. thick on the sides and floor, the sides gradually sloping to the horizontal. There was no sign of an entrance. In the centre was the shaft of a later tomb. See photograph, pl. lviii, 4.

From the rubbish on the spur, which was in places strewn with charcoal and ashes, came an ox-skull, horn, and leg-bones, lying on the original surface. Also the large pottery pan T1 (pl. xlv), with a pot-mark (pl. lv, 20).

Spur 12. Remains of another hut were found here ; this was oblong, and measured at least 62 ins. along the north side and 83 ins. along the east ; but the south-west part was missing, and it may never have existed. The *gebel* sides and floor were lined with mud-plaster as usual, and the walls sloped out. The floor was 10 ins. below what seemed to be the old desert level on the west. The south-west part was covered by 2 ins. of ash. This may have been a two-sided shelter rather than a hut.

Spur 23. This does not seem to have been the site of a Predynastic settlement, yet six empty Predynastic pots were found together, mouth downwards, just under the surface. There were three of R85c₄, two of R81k₃, and one R97p. Six Ptolemaic pots were scattered close by, and there were also a couple of Badarian rippled sherds. The reason for the association of these pots remains obscure. This group was numbered 4401.

Spur 24 (Area 4500). At the toe of this spur there were some scanty village deposits which con-

tained a few sherds of black-topped pottery, flint flakes, and the nose of a pottery model boat. These were probably Predynastic.

99. Miss Caton-Thompson has so fully described the village remains north of Hemamieh that it is needless for me to go over the same ground again here. The hut-circles described above agree closely in their general details with those found in the Hemamieh village. There is very little, if anything, to date the Badari huts. Under the temple, the associated objects are undoubtedly mostly Early; but it seems unlikely that round huts are confined to the Early period, and that they were abandoned for rectangular dwellings at any very definite time. Round huts or *mapalia* were used in classical times by the Libyans (EVANS, *Anthropological Journal*, vol. lv, p. 224), and are found at the present day not far distant in the Sudan. The Punt huts in the xviiith dyn. were almost certainly round. The "Pan" people built round huts and gradually adopted the rectangular form (*Qau and Badari III*). Old fashions die hard; and at the present day in Basutoland there are round huts in the native villages with rectangular houses alongside, copied from European dwellings, but built of native materials.

The form of the graves is sometimes thought to be an indication of the shape of the dwellings, though probably the grave would change its form some considerable time after the change in the habitation had taken place. In Egypt the graves of the Predynastic people are oval in the early periods, but become more straight-sided as time goes on. Well-cut rectangular graves only appear in the Late period.

It is noteworthy that most of the Predynastic towns at present known are mainly of the Early period. The Badari villages, the village on the Hemamieh *wadi*, the sites at Tukh, Maḥasnah, and Hierakonpolis are all apparently Early. The explanation seems to be that there was a scarcity of good habitable land in the area periodically inundated; it was only when the Middle Predynastic people had reclaimed land by dyking and canalisation that suitable ground became available. This was especially the case where the desert, bordering the irrigated land, slopes steeply as at Badari and Hemamieh. Where the desert edge is flat and low-lying, the advancing deposit of Nile mud has covered up both Early and Late Predynastic towns and cemeteries. See NEWBERRY, *Egypt as a Field for Anthropological Research*, p. 5.

The position of the cemeteries was to the south of the towns in the sites that we know. If the prevailing wind was from the north, as it is now, the reason is obvious. Mummification was not practised as in later times, and no doubt it was thought desirable to live to windward of the departed. The Badarian graves were, however, to the eastward of the settlements, as far as we can judge.

CHAPTER XIII

DETAILS OF THE PREDYNASTIC CEMETERIES

QAU

100. *Cemetery 000*. Found loose were a slate palette, type 45d, and another (broken) of the double bird form.

Cemetery 100. The scattered pottery consisted of B29b₂, 76b₂; P1b₂, 2c, 28a₃; W42, 43b; R22b, 67; and L12p (with the potmark pl. lv, 25). Strings of beads are:

100. Carnelian (86f₁₀, t₁₆), orange limestone (82c₃), serpentine (78b₆).

100/2. Grey stone (86f₈, m₁₂) with *Conus*, *Ancillaria*, and *Nerita* shells, and a shell bracelet.

100/3. Grey and buff limestone (86k₂₈, m₁₀, p₁₂, p₁₈, r₁₂) with a shell bracelet.

100/4. Black limestone (86m₁₂, m₂₂) and calcite (86c₁₀, f₈).

100/5. Carnelian (86k₂₈, l₄, m₁₀), ivory (56h₃, k₃), pebble (82h₃, 86f₈), black limestone (86m₂₂), shell (86l₁₂, p₄); and a few *Mitra* shells.

100/6. Grey limestone or slate (86f₂₂, m₁₀-p₁₈, string), pink pebble (82f₃ one, 86c₁₀, f₈ four).

100/7. Grey soapstone or slate (86m₈, m₂₂).

100/8. Black limestone (86m₈, m₂₂, s₉), pebble (86s₆), shell (86m₂₂), and pieces of coral.

Other miscellaneous objects are: limestone vases (one pl. li, 29, the other like pl. li, 26); slate palettes (types 91b, 91h, 91r, and pl. lii, 5, 6, 8, 10); part of a disk mace-head (pl. liii, 5); piece of an ivory bracelet (pl. liii, 34); fragment of an ivory wand (?); and a female statuette in fine red pottery (pls. xxxiv, 6; liii, 48).

The date of nearly all these things is Early Predynastic. The earliest part of the cemetery is that to the south and south-west; there are later graves to the north, and one or two Late Predynastic burials on the outskirts (106, 117, 145).

101. Rectangular grave with a shelf along the north side, 21 ins. wide and 13 ins. high above the floor.

105. Child with a necklace of serpentine cylinder beads alternating with ring beads of carnelian, lazuli, turquoise, and serpentine.

110. Adult male with black-topped pot at hands in front of face. A thick grass mat was laid over the body and the pot, and was tucked in at the sides.

112. The bone bracelet was a very rough irregular oval.

113. This grave seemed to have had a recess on the west, measuring 24 by 42 ins., but it had caved in.

118. Young female covered by a skin folded on itself so that the hair was on the inside.

136. Female with four black-topped pots in a row from face to knees. Ivory bracelets. Ivory pin, comb, and pair of double bird slate palettes or amulets close to knees. Malachite and resin. A reed mat over the body and the objects.

138. Slate palette over knees.

139. Necklace of grey limestone and white shell ring beads, mostly strung alternately, but with occasional groups of two, three, or four of a colour. The *Nerita* shells were threaded with them, here and there.

141. Oval grave, undisturbed, of a girl with necklace of grey and pink limestone ring beads, and a few large carnelian ring beads—one of them with seven facets.

144. Slate palette over knees.

146. Slate palette, pebble, and malachite together in front of forearm.

101. *Cemetery 200*. A large number of pots which had been thrown out from graves were recorded here. These are:

B53c, 58b.

P23c, 24n, 41c.

F58b₂.

W19, 41d, 43g, 56a, 56g, 58 (pattern R), 62, 71a (pattern D), 80.

D20b₂, 59t (scrap), sherd with ship (pl. liv, 10).

R23h, 24a (two), 24m, 26f₂, 36, 69r, 75, 84e, 86f, 86g.

L7f, 10b, 12c, 30c (two), 34g, 36a (potmark, pl. lv, 29), 36g, 36k, 53k (potmark, pl. lv, 48).

There were also some Predynastic beads of carnelian and pink and white limestone found together in a plundered Roman grave (types 78d₁₂, d₁₈, 86c₁₀, f₄, f₁₀, k₈, k₁₆, l₈, t₈, 89b₈); a scrap of a pink limestone barrel-handled vase, and of an alabaster cylindrical vessel; a slate palette, type 96m, and part of another round one.

The date of the majority of the graves was either S.D. 44–66 or S.D. 78–81. One showed evidence of roofing poles across it.

212. Mud coffin, rectangular, but rounded at the south or head end. Young, very prognathous female. Six pots arranged round coffin: at south-west, R85f (potmark, pl. liv, 2); at mid-west, R24a; at north-west, R88; at north-east, R71b; at mid-east, P22c (above coffin); at south-east, W87m. Over the nose and between the eyes was a slight but distinct trace of copper.

223. Two burials, one of a child at a slightly lower level, another of an adult cutting into it on the south-east. A Roman burial lay across the junction of the two lower graves. Both were disturbed, only a few bones being left. In the child's grave was a pot P82j (S.D. 44–60), and a little globular basalt vase with incised line decoration (pl. li, 33). In the other grave were two pots (S.D. 78).

HEMAMIEH

102. *Cemetery 1500–1800*. The following pots were found loose in the rubbish:

B55b.

P40c₂ (potmarks, pls. liv, 5; lv, 35), 81a.

F34c.

C47m.

D1f, 8g, 26h (potmark, pl. liv, 11), 36l, 67d.

L16f, 42d, 64.

On sherds were the marks, pl. lv, 23, 28, 33, 34. Beads found were of lapis lazuli (75b₃) with coral; the black limestone shell amulet 56d₆; and a short string of carnelian ring beads (86l₄–m₈).

Other antiquities were vases of limestone (pl. li, 2, 27) and breccia (pl. li, 26); slate palettes, types 40h (two), 46m, pl. lii, 5, 14, part of a turtle, a small rhomb, and one roughly square; the pink limestone horned amulet pl. liii, 50; a disk mace-head of syenite (pl. liii, 2), and a model in black-topped polished pottery (pl. liii, 7); a hammer-shaped mace-head of pink limestone (pls. xxxiv, 5; liii, 9); pear mace-head of fine white limestone (pl. liii, 11); two ivory tags (pls. xxxiv, 6; liii, 26); a bone harpoon (pls. xxxiv, 4; liv, 1), a shell bracelet; a tiny slab of syenite for a game (pl. liv, 5); small fish-tailed flint (pl. lvii, 4), and parts of two others; and the flint knife (pl. lvii, 4).

The date of this cemetery is mainly from S.D. 40 to 70; nine graves are earlier and six later. The cemetery, therefore, for some reason, does not agree with that of the settlement to the north of the *wadi*.

In that, we found hardly anything that could be placed later than S.D. 45, and most of the things were Early Predynastic.

103. 1504. Oval grave, bottom and sides faced with mud plaster.

1604. Pot R42k, 30 ins. down, containing a diorite disk mace-head (pl. liii, 1). No grave apparent.

1606. Pot R42h, 35 ins. down, containing a bone harpoon (pls. xxxiv, 6; liv, 2), and five *Spatha* shells. No grave apparent.

1624. The stone vase, indicated on the Register, was a fragment of very fine grey limestone.

1625. The slate palette was roughly rectangular, with rounded corners ($5\frac{1}{4} \times 3\frac{3}{8}$ ins.)

1629. A roughly rectangular grave, fortunately quite undisturbed. The body lay head south, hands before face, on left side, thighs at right angles to spine. There were faint traces of a wooden coffin $26 \times 44 \times 9$ (?) ins., and also of cloth wrappings. Pot 82j was behind the head, and R23f north of the knees. South of the knees was the squat vase of black and white metamorphic limestone. At the knees were also the slate palette (pl. lii, 13), with four pebble grinders; while another palette (pl. lii, 27) lay over the forearms. Four necklaces consisted of (i) various large beads of carnelian and lazuli, a few of white limestone, a small bull's-head amulet, and a pierced obsidian flake; (ii) smaller beads of carnelian and lazuli, including two carnelian ring beads with seven facets (86u₃); (iii) fine beads of olivine and garnet with a shell in olivine, a crocodile in green calcite, and a pendant of glazed quartz; and (iv) blue glaze ring beads. The original order of these beads is not known; all that is certain is that the large carnelian and lazuli were on the same string. But it is probable that the four necklaces were more or less as they are now threaded at University College, where they form the finest set of Predynastic beads in the collection.

1645. Mud-plastered grave, with traces of wooden coffin. In addition to the stone vases drawn, there were fragments of a black and white porphyry vase, and parts of the rims of two alabaster vases.

1647. Plundered grave containing a fine rippled knife of translucent flint, pear mace-head, a black and white limestone barrel-handled vase, and a copper pin with the end wound round the stem.

1664. Body lying on right side; head missing, but beads still at neck. The "coral" mentioned in the Register may be *Dentalium* tubes. The black-topped pot comes from the filling.

1692. Grave lined with bricks, up to a height of 21 ins.

BADARI

104. 3507. An isolated grave on spur 13. The saw-edged flint (pl. lvii, 2) was found above much disturbed bones of an adult male with dark wavy hair, not prognathous. It may quite well be a Badarian burial.

3608, 3609. Two Early Predynastic graves on spur 14; undisturbed. In both cases, the pots were before the face. In 3608 the two *Spatha* shells were behind the pelvis, while the palette and pebble were under the curious bowl F8m.

Cemetery 3700, Spur 15. The graves on this spur were mostly Predynastic, with only a sprinkling of later burials, of the vi-xiith, xvii-xviii dyns., and the Roman period. The sequence date of the graves is roughly 44-60 on the centre of the spur, with some of S.D. 77-78 towards the north edge and toe.

The following loose pots were found here: P40c, 54b; F91h; W19 (containing bread or grain); D12f, 61b, 82b.

Scattered in the rubbish, left by the plunderers, were also two pendants of alabaster and carnelian (89b₃); vases of pink limestone (pl. li, 18, 24) and slate (pl. li, 22); slate palettes of types 40h, 46u, and 47r; a marble from a game; fragments of fish-tailed flints (pl. xxix, 3), and a small rippled flint knife; a model boat (?) in clay (pl. liv, 20); and the double female figurine of clay joined with straw pegs (pl. xxxiv, 4).

3701. Rectangular grave of a child in a wooden coffin; a slight shelving on the west side of the grave. Pot D66l in north-west corner; pot D12e, filled with ash, at hands before face; pot L33b₂ in south-west corner, pot L36g₂ on shelf. Two carnelian beads at neck; skull and bones of a small ruminant, before face.

3702. Two young bodies side by side, one in a wooden, the other in a reed, coffin. Body A was the younger; and near the head were the pots P11b, D61z, R1d, R68m₂, and a *Spatha* shell. Near the head of body B was R92; the remaining six pots lay between the bodies.

105. 3703. Pots R26c, 69a, before face; the other two behind head.

3704. Male body with black moustache. Pot D67c₂ in front of face; other pots in a row behind the back. R74a and R74b were filled with ash.

3707. Child, about twelve years old. The bowl

L12k was in front of the face, with the smaller vase L53m underneath it. Six other pots arranged in a row from head to feet.

3717 and 3724. Graves brick-lined.

3730. Pots and stone vase before face. In the bowl P22a were the stone vase and the pot P26b. At the neck and wrists were strings of blue glazed quartz, rough garnet, copper, blue glazed steatite, and one or two carnelian and lazuli beads.

3731. Pots arranged before face and arms. Necklace of blue glazed steatite beads, with a few carnelian and garnet, and *Natica* shells.

3740. Bodies wrapped in matting. Thin planks lying on top (from roofing?). Matting and sticks at the sides of the grave, to keep up the gravel. Male and female side by side, lower parts cut away by Roman burial. In front of the man were the leg bones of a calf (?). The woman had a necklace of a few carnelian and blue glazed steatite beads. Touching her head was the knobbed mace-head of pink limestone (pls. xxxiv, 5; liii, 8). In front of her face was the slate (type 91b) with its pebble, and a small oval basket containing animal bones (pl. lx, 13). On her chest was a tiny basket with resin, and scraps of a female figure modelled on a stick in painted vegetable paste (as in *Prehistoric Egypt*, pl. xlv, 29, of the same date).

106. Cemetery 3800, Spur 16. This was almost entirely Predynastic, only two graves being dated to historic times. The earlier burials were in the centre (s.d. 37-48), with later ones to the east and west (s.d. 48-58). The list of pottery thrown out by plunderers is as follows:

P24m₄, 40h, 57a, 87g, 95b. F58q. W3d. D8k, 31b, 36a, 36j, 41k, 43d₂, 47d, 59w, 66c, 67c, 67l, 67l₃, 68a (two). R44l₂, 81w, 84e.

We also found the following, scattered: beads of lazuli (86p₁₈) with a *Nerita* shell; of carnelian (86l₄) with an ivory finger-ring (pl. liii, 37); vases of grey marble (pl. li, 23) and alabaster (pl. li, 11); slate palettes of types 47m, 45d, 91b, and pl. lii, 4, 27; black and white limestone disk mace-head (pl. xxxiv, 5); limestone skin-stopper (?); copper hook (pl. liv, 8); shell bangle; pottery model boat (pl. liv, 18); basket-work (pl. lx, 14); matting (pl. lxi, 8); scrap of a rippled flint knife; fish-tailed flint (pl. xxix, 3); a large fragment of a knife (pl. lvii, 3); several flint flakes (pl. lvii, 3), and the arrow-head (?) (pl. xxix, 3).

3802. Grave with two partly disturbed bodies, a woman, and a child about eight years old. With

the woman was a short string of carnelian ring beads and *Natica* shells. On each of the child's wrists were six ivory bangles; it also had a bracelet of fine ring beads of carnelian and blue glazed steatite. Other objects in the grave were a small fish-tailed flint, a pebble, and two little decorated tusks, one solid, with a groove, the other hollow with four holes at the end for suspension or for fastening a cover. The most interesting thing was the oval dish of polished red pottery, with the representation of a loom on the inside in whitish paint (pl. xxxviii, C7ok; in photograph with the group, pl. xlviii, 6). The other pottery is detailed in the Register. s.d. probably 37-38, but possibly 37-43.

3804. Adult male with fourteen pots, three being of type R69a. There was one ivory tag (pl. lii, 29), a carved horn (for snuff?) (pl. xlviii, 2), and its accompanying tiny ivory spoon (pl. liii, 40).

3812. Robbed grave, with four pots (two of type R94h₂) and a few beads and shells. There were also pieces of rough baked pottery, evidently from the figure of a crocodile; also part of a boat in the same material.

107. 3823. The body had been covered with reed matting, and was thoroughly ransacked. The thirteen pots included seven of type R23g₂, and two of P52c; for contents, see Chapter XIX. A large basalt vase, and a small one of breccia, both with conical feet (pl. li, 5, 4), also remained. In the south-west corner of the grave there had been a large basket, containing most, if not all, of the following objects: a slate palette and two pebbles (pl. xxxiv, 3), three ivory hippopotamus amulets (pls. xxxiv, 4, liii, 42), galena, resin, pieces of ostrich egg-shell, leg-bones of an ox (?), and some fragments of wood 20 ins. long, which can only be described as looking like the prow of a boat, with a second and smaller one fastened to it on the inside.

3828. Plundered grave with a cross-lined bowl C16m, a limestone skin-stopper (?) (like pl. lviii, 5 (3200)), scrap of an ivory finger-ring, and three ivory tusks (as in *Prehistoric Egypt*, pl. i, 13). Two of these were plain, with loops at the end; the other had no loop, but at the pointed end the vestiges of a human head remained in the shape of two eyes and sloping lines, incised in black.

3829. With other objects were the hollowed ivory tusk with incised lines and perforations at the wide end (pl. liii, 18), and two plain ivory tusks.

3836. A few beads, and a pair of ivory tags in small fragments.

3839. This was obviously a later grave, being lined and roofed with plastered brickwork. The bricks measured $13 \times 6 \times 3$ ins.

3841. Undisturbed child, covered with matting. Pot D8n was at the head; R92 and two of R69a were at the feet.

3844. Untouched adult female with long black wavy hair and three pots. She wore a bracelet of shells, and close to her hands were the two slate bird amulets (pl. liii, 20), the amuletic comb stained red (pl. liii, 44), the long-toothed comb (pl. liii, 31), and a flint flake (all in the photograph, pl. xxxiv, 4).

3851. Adult female, with reed mat over the body. Two pots at knees. Necklace of carnelian ring beads. In front of face, palette and pebble (pl. xxxiv, 3), and three ivory tags (pl. xxxiv, 4; one drawn pl. liii, 28).

108. *Cemetery 3900, Spur 17*. This was mostly Middle Predynastic, with a few Early graves. There were also some xvii-xviii dyn. burials, but there was very little left to be recorded, as natives had ravaged the spur very thoroughly. The following were picked up loose: the pots B74f (with potmark, pl. liv, 9), F34d, R86d, and L60; sherds with potmarks (pl. liv, 12, 18); a turtle slate palette, type 14p; and a long flat flint knife (pl. lvii, 3).

3904. Untouched adult, with reed mat over body and two ivory tags (pls. xxxiv, 4; liii, 30).

3905. Grave lined with boards $1\frac{1}{2}$ ins. thick, to a height of at least 18 ins. Body gone. Three pots, two small flint flakes, fragments of ostrich egg-shell, a pebble, and a few ring beads of blue glaze, carnelian, garnet, serpentine, soapstone, and three of clearest white quartz-crystal.

3907. Grave, apparently lined with boards.

3909. Adult male, in wooden coffin. Seven pots, and a large *Spatha* shell; two *Natica* shells, in front of face or at the wrist.

3920. Undisturbed male, head north, face west. Two very rough bowls, R3f₆, at knees, and a small flint arrow-head (pl. xxix, 3). A similar form of pot was in the untouched grave 4001, which is undoubtedly of s.d. 73. On the other hand, the Badarian pots RB11rh are much like this type, and it is a question whether this grave is really Badarian, or whether the arrow-head is not contemporary.

109. *Cemetery 4600*. Predynastic graves all of the Middle period, except one Late. No dynastic burials. Three pots, F58l, D31z, and D41e, and a stone vase (pl. li, 10).

4601. Undisturbed male, with matting over body.

At the north end of grave, two pots, R33a, R85c₆, the latter full of ash. The other three pots were at the knees. In front of the face, a small slate palette, of type 45d, and the oval mace-head (pls. xxxiv, 5; liii, 10).

4602. Girl (?), possibly in a wood coffin, undisturbed. Five pots in south-west corner of grave. Necklace of carnelian, lazuli, olivine, garnet, glazed quartz, resin (?), and blue glaze ring beads, with a carnelian pendant. Bracelet of pale green glazed steatite cylinder and ring beads.

4604. Young body covered with matting, undisturbed. Three pots in front of face. Close to elbow, in a basket, underneath the matting, were a rough scrap of slate and pebble, fragments of ostrich egg-shell, five various shells, three olivine ring beads, a broken calcite barrel bead, a calcite cylinder bead, two olivine flies (36f₆), and a flat buff and brown mottled unpierced pebble. Round the neck was a string of odd beads of carnelian, lazuli, olivine, calcite, soapstone, green glazed steatite, blue glaze, and coral tubes, two or three of each.

4615. Undisturbed female, in grave with sticks all round to hold up roof. This had perhaps been of matting, as it lay over the body. One pot, D61k, contained organic matter, and a yellow limestone vase contained scented fat (pl. li, 21) at elbow. Malachite under the pot, and slate palette in front of arm. Two carnelian and two serpentine beads on right wrist. Photograph of grave, pl. xxxiv, 2.

4620. Undisturbed young male (?), with one pot, W43b, before the face. The body, which was in excellent condition, was wrapped in linen of two qualities, and covered with matting. It was brought home carefully packed by my wife without any treatment, and is now in the Anthropometric Department at University College. Mr. Midgley has reported on the linen, in Chapter XX.

4622. On the right wrist were blue glaze and carnelian ring beads, perhaps threaded separately, as two bracelets.

CHAPTER XIV

THE PREDYNASTIC GRAVES AND BODIES

110. THE types of Predynastic graves are so well known that it is not proposed to enter into much detail here. Little that is new has been noted at Badari.

The Graves. These were generally oval, with a tendency to become straight-sided with rounded corners, and finally rectangular and well cut. Only

one grave had any elaboration, viz. 101 with a shelf at the north end. One grave was mud-plastered and four were brick-lined. The sequence date of these is 77-78, with one rather vaguely dated to 69-75. One was roofed with planks supported by sticks at the sides (3740, s.d. 38-44), and in one, only the sticks remained (4615, s.d. 52-66). Some graves were boarded at the sides; in a few instances these boards, which were never very distinct, may have been parts of coffins; but the date range of the twelve examples noted is very small; eight are s.d. 57-60, and four s.d. 48-53.

Coffins and Wrappings. Matting was found in fifty graves, almost always lying over the body and sometimes over the objects. This custom gradually died out. Of the graves of which the earliest possible sequence date is 30-39, 34 per cent. had matting; s.d. 40-49, 20 per cent.; s.d. 50-59, 18 per cent.; s.d. 60-69, 25 per cent.; s.d. 70-79, 8 per cent. These are only rough figures, but they serve to show how the use of the matting was gradually abandoned, after being universal in Badarian times.

From the fact that the matting is not under the bodies in Predynastic graves, but sometimes over the objects as well as the bodies, it would appear to have served rather as roofing than as wrapping.

Skins, probably goat, were only found in three graves, 118, 4606, and 4609, the second being of s.d. 58-60.

Traces of wooden coffins were seen in twelve graves. They could be measured in three only (1629, 1630, 3199, see Register). They are found in all three periods. An oval basket coffin was used in 1655, reed coffins in 3702 and 3704 of s.d. 55-61, and a mud coffin in 212 of s.d. 78.

III. *Attitudes.* These were always head south, with five exceptions: grave 144, where it was east, and graves 1630, 1713, 1716, and 3920, where it was north. Two of them were of small children, and the last may be of a Badarian. The bodies were all on the left side, except where the direction of the head is underlined in the Register, six cases in all, which include 3920, possibly Badarian.

CHAPTER XV

THE PREDYNASTIC POTTERY AND POTMARKS THE POTTERY

112. ALL new forms are drawn on pls. xxxv-xlvi. At the top left corner of each drawing is given the

probable sequence date; at the top right corner, the *Corpus* number, dovetailing in with the type numbers in the *Corpus of Prehistoric Pottery*; at the bottom left is the grave, or group, number; and at the bottom right, details of description. Inside some of the drawings is the letter T. This denotes that the form was found in town rubbish; in many cases, these forms are found only in towns, but a few occur also in graves. Where there are potmarks, the reference to the drawings on pls. liv, lv, is given inside the outline. A few special forms from town-sites, which do not fit in with the general *Corpus*, are classified separately on pls. xliv-xlvi; this class has been called Class T (Town).

Types of pots identical with those in the *Prehistoric Corpus* are all listed with their grave numbers on pl. xlvi.

Black-topped. The new types are very largely from village sites (marked T). There is perhaps a tendency in these forms to have a plain straight rim, rather than the everted lip more usual in the pots found in the graves. It may be that this was thought more practical for home use, as less liable to breakage; it carries on the tendency shown by the Badarian pots, which rarely have a turned-out lip. Forms 3b₂ and 6p are distinctly reminiscent of the Badarian, if not actually of that age. The sequence dating of the village pots is difficult, owing to the groups consisting largely of new forms. The dates given are the latest which are likely; some may quite possibly be earlier.

Type 58h is an example of a black-topped pot baked and used without its polished red coating.

Polished Red. Type 64h is an unusual form; rather similar types come from Maḥasnah, all before s.d. 40 (AYRTON and LOAT, *El Maḥasna*, pl. xxxii). This agrees with the early date of the village under the Badari temple (3000/3). The cord-pattern running round the necks of 75p and 80t is like that on T8 (pl. xlv). This pattern is seen on a jar from Maḥasnah (*ibid.*, pl. xxv, 1, p. 34), on another from El Amrah, grave B139, s.d. 44 (MACIVER, *El Amrah and Abydos*, pl. xiii, R50, p. 20), and on various others in the *Corpus* (pl. xiii), of s.d. 38-75. Vertical burnish lines, which are usually very late, as on 40h of s.d. 73-77, occur also on the allied form 97m of s.d. 68-69.

113. *Fancy and Black Polished.* Type 8m, with the curious little pocket inside the rim at one end, is like the *Corpus* form pl. xv (below 5b), which unfortunately has no history. 27k is similar to

B731 (?), C39t, C40, and F95 in the *Corpus*. The first is from an undated grave at Diospolis, U330. These cups link up with the Badarian forms pl. xvi, MS1-4; see Section 50. A very remarkable type is 80t, black polished, with carefully made grooves or flutings. It gives a strong impression that it is a copy of metal-work. A precisely similar vase comes from El Amrah (AYRTON, *El Amrah*, pl. xiv, F2; p. 43), but this is not dated. A scrap of another was picked up in the Predynastic town at Hierakonpolis in 1927. 91h is a curious little barrel-handled vase of pottery with an incised basket pattern filled in with white; this pattern is not only on the sides, but on the rim and even on the base as well.

Cross-lined. Our examples are, with one exception, 70k, all flat-bottomed bowls, so commonly found in this class of pottery. A scrap with branches is drawn on pl. liv, 13. The designs call for little comment. The way of dotting patterns (18d, 18n, 33k, 44t, and 50s) seems to be new, and is perhaps a local fashion; or it may, if the bowls were traded, show that they came from a rather different district. Patterns with dashes are shown in *Prehistoric Egypt*, pl. x, 1 and 2. The animals on 49k are evidently the same as those on pl. xiv of AYRTON, *El Mahasna*. It has been suggested that they are elephants (*Prehistoric Egypt*, p. 16); but an animal with downward horns, such as a buffalo, seems more likely. It is also very like a wildebeeste. The flat dish, 70k, is unique, and of the greatest interest. On it is represented a ground-loom, with a few of the weft threads in position. The small object alongside is difficult to explain. The two men seem to be preparing the yarn in some way, by hanging lengths over a cross-pole. A photograph is given on pl. xlviii, 6; but the painting is rather faint and does not show up well.

114. *Decorated.* All the usual kinds of decorated pottery are represented. On pl. liv are given four other examples: 10, a small piece of a barrel-handled vase with ship; 14, a scrap with a man holding a staff, and a branch in front of him; 15, the hindquarters of a pottery hippopotamus, with part of a ship, harpooners, and harpoons; and 16, an almost obliterated painting of two ships on a barrel-handled vase.

The pots decorated with ships are the most interesting of this class. We have two only that can be dated, 43d of s.d. 52-55, and 43e of s.d. 58. One, 47d, is unusual in that it has triangular and

not barrel handles, and the three ships have no ensigns. The triangular handles on all the specimens in the *Corpus* which can be dated are of s.d. 46-47; they seem to be earlier, therefore, than the barrel-handles, but 59d and 59q, without ships, may be later.

Several varieties of standard are seen on the ships. The commonest of all, the harpoon, occurs on four of our eight vases; the two hills, the branch, and the quadruple horns on one each. The rare arm and hand is seen on 43e, in conjunction with the branch; and on 41e is a standard with horns which is not like any previously figured. The boat on the other side of this pot has the same standard, but the pot is badly broken, and most of the other details are missing.

The hippopotamus pot (pl. liv, 15) survives only in the one fragment, the hindquarters. The most careful search produced no other pieces. The idea of the painter seems to have been to represent the harpoons with which the hippopotamus was hunted, the hunters holding the harpoons, and the boat in which they went to the hunting-place. Harpoons of bone with one barb are shown on the same plate (liv, 1, 2); copper harpoons (PETRIE, *Tools and Weapons*, pl. xlv, 24-39) were probably used for attacking an animal with so thick a hide. In this connexion, it is interesting to note the name of the tribe called *Mesenu* or *Mesentiu*, who assisted Horus of Edfu in his conquest of Egypt (HALL, *Cambridge Ancient History*, vol. i, p. 261). This name is sometimes written with the harpoon sign (GARDINER, *Egyptian Grammar*, p. 499, T19); it used to be translated as "metal-workers," but is now read "hippopotamus-hunters" (*ibid.*, p. 544). For a photograph of our fragment, see pl. xlviii, 3. An undecorated pottery hippopotamus is in the Cairo Museum (Room B, Case F).

Type 72k is a curious example of the Cross-line designs carried out in the Decorated technique, i.e. in dark red paint on a pinky-buff ground. It is difficult to say, for certain, whether there were originally three or four cups; probably there were four; the arm was broken off and the end then smoothed. Two of the other cups were also broken away; one is left rough, and the base of the other has been ground smooth. With it was a regular cross-lined bowl, 49k, and the grave is therefore presumably of s.d. 31-34. For other examples of double cups joined by a cross-bar, see *Corpus*, pl. xvii; they are of polished red pottery, but undated. The

quadruple form is seen on a potmark (*Naqada*, pl. liii, 151) of s.d. 38-43.

Type 74k contained a child's burial and can only be dated by its resemblance to similar specimens. Type 74 in the *Corpus*, which is like it, though with an inside ledge round the rim, is of s.d. 80. Type 74d, with the incised triangles round the neck, is similar; and so is R49.

The little pot 93a₂, with pecked decoration, was found with R68t in a dynastic tomb-shaft sunk in a Predynastic town-site. It is probably Early, judging from the date of the other remains in the vicinity. Types D93a, b, and c in the *Corpus* are obviously related, and 93b agrees in its s.d. 38-43. Types 93a and b came from Naqada.

115. *Rough*. The large cooking-pots, pls. xlii, xliii, are a continuation of the Badarian forms, pls. xviii, xix. The gradual tendency seems to be for the mouth to become smaller, and the sides to curve inward. The ridge round the pot near its point appears in 83t₂ at s.d. 37-38; it is much more clearly marked in the narrower pots 81c₂ and 81b of s.d. 43-46 and s.d. 70-81. We may perhaps see the latest form in the tall narrow pots with well-marked ring round the point (PETRIE, *Royal Tombs I*, pl. xxxix).

The Town Pottery. T3 (pls. xliv; xlviii, 1) is a form quite unknown, hitherto, from sites in Egypt. It is spheroidal with flat base and rather narrow mouth. Round the mouth projects a wide rim or collar, like a circular tray. A pot with a somewhat similar outline is from an early Dynastic grave in Nubia, no. 103.37 (FIRTH, *Archaeological Survey of Nubia*, 1909-10, pl. 27b4, p. 102). This is described as of thin red polished ware on p. 102, and of smooth unpolished red or brown on p. 169. As no drawing is given, it is not possible to say whether there is a wide collar like ours or not. Mr. G. W. Grabham has very kindly made enquiries, and he tells me that a similar type is "well known in the Sudan as a form that is in use. It is called *kaborai* and is often used for containing yeast for making bread. It is not used for distilling. Such pots are said to be made by the Gehena on the Dinder River."

No. T11 is of interest, showing, as it does, that loop handles were not only known in Egypt in Early Predynastic times, but were also made there when required. This pot is essentially the same in its manufacture as other red polished pots, and was certainly not imported.

No. T12 is a very strange form, with its large loop handle. The derivation from a gourd is evident, and we have here a decided link with African ideas. Coming as it does from the settlement under the temple, it is probably Early Predynastic. The nearest parallel that I know of is in *Diospolis Parva*, pl. xix, 70. This is classed with Late pottery, but there is no reference to it in the text.

THE POTMARKS

116. Plates liv, lv. These are mostly scratched on the pots after baking, and are accordingly marked "Owner." A few marked "Potter" have been deeply incised on the clay before the drying in the sun, or before the baking. Few are of any new interest. Nos. 1 and 2 are of s.d. 78 and are like the Protodynastic marks in *Q. and B. I*, pl. xxi; see Section 50. Nos. 17 and 18 are like the standard often seen on the ships painted on the pottery; see also *Diosp. Parva*, pl. xxi, 89-94. Nos. 20 to 25 also occur on many pots from Naqada (pl. liii). The double lozenges, 32 to 34, are not recorded from other sites. The quadrupeds 42, 43, have unfortunately both lost their heads. Nos. 45, 46, 47, are a sign like a mace with two streamers or feathers at the top; the three pots bearing this sign are all probably just before s.d. 40. The same mark appears at Diospolis (pl. xxi, 97) of s.d. 31-38.

CHAPTER XVI

THE PREDYNASTIC AMULETS AND BEADS

THE AMULETS

117. THE few amulets are shown on pl. xlix. The "bull's-head" figures in two examples, 32a₆ and 32a₉, of s.d. 60-73 and 44-60 respectively. Both are of a crude character, especially the latter. The earliest dated example is *Naqada*, pl. lxi, 4, of s.d. 34-46.

The fly, 36f₆, of s.d. 57 (?), is known from several other examples, the earliest being of s.d. 40. The hour-glass bead 73g₃ was found with ivory tags and cannot therefore be much later than s.d. 50; it is probably earlier. An identical bead of serpentine, now at University College, comes from Gerzeh, grave 205, s.d. 64.

The remaining amulets are all new at this age: a crocodile, 33h₆, in green calcite (s.d. 44-60); three shells (*Nerita*?) in olivine, lazuli, and black limestone of s.d. 44-60; two long spiral shells in ivory;

and the very striking four-rayed star and the crescent, both in bright red carnelian of s.D. 39-44, found with the decorated hippopotamus. The ivory pendant 74a₂ is perhaps intended for a shell of some kind.

Of the above, the crocodile is a common amulet from the vith dyn. onwards (*Q. and B. II*, pl. xcvi), while the *Nerita* shell occurs in the Protodynastic period (*Q. and B. I*, pl. xvii, 56d.), and in the xiith dyn. (PETRIE, *Amulets*, p. 27).

THE BEADS

118. Plates xlix, 1. Blue glazed frit is found all through the Predynastic age, generally in the form of ring beads, but sometimes of cylinders and barrels. Some particularly bright, almost sky-blue, ring beads came from grave 4622 dated rather vaguely to 57-66. One black glaze ring bead came from the robbed grave 1681; and some kind of black paste, also in the form of ring beads, was found in graves 3708 and 3919, of s.D. 52-58. Glaze, as a material for beads, is rare compared with the different kinds of stone.

Steatite is by far the commonest soft stone used; all forms are cut in it; it has probably always been glazed, blue as a rule, but sometimes green. In the latter case, it may be confounded with turquoise. Soapstone ring beads occur rather frequently from s.D. 50-60, but also earlier at s.D. 37. Limestone (pink, mottled, brown, buff, black, grey, white, and green) was used to a small extent, especially in the Early period; we found several strings of pinky-buff and grey dated to the thirties. Similar strings are from grave 1503 at Naqada (s.D. 36) and from grave C14 at Diospolis (s.D. 30), both at University College.

The more translucent calcite, white, yellow, or green, is usual for all forms of beads in the Middle period. Alabaster occurs in large ring beads from grave 4623, probably Early. Ring beads of a grey stone, which may be slate, were found in graves 100/6, 1646, 3843, 3916, all probably Early.

119. Serpentine, generally of the noble variety, is found in eight different types; and the pale hard translucent olivine was used specially for small ring beads. We found neither of these certainly, before s.D. 43. There had perhaps been a whole string of brilliant little quartz-crystal ring beads in grave 3905 (s.D. 58-62?), but unhappily three only remained. One or two glazed quartz beads are all of the Middle period. Beads of all forms, more

especially rings and cylinders, were made in lazuli; they occurred in eleven dated graves, of which none can be earlier than s.D. 43 or later than s.D. 64. Garnet was also common, and is found during the same range of date, with two examples dated to s.D. 37. One pierced garnet crystal was found in grave 3850, about the size of 86s₆. Carnelian was, as always, the commonest of the hard stones used in the manufacture of beads; and other pebbles are occasionally found. One or two ring beads from grave 4602 (s.D. 57-58) have been doubtfully described as obsidian. Another black material with a rather bright surface like jet has been identified as resin, in one instance (grave 1773).

Well-known hard stones which are noticeably absent from the Predynastic graves at Badari are amethyst, haematite, and felspar. One large ring bead, 86f₄, from grave 127 at Qau, is of green felspar.

Copper is found in the form of ring and barrel beads in grave 1681, not dated, and in grave 3730 of s.D. 44-50.

Of organic materials, egg-shell is the commonest for ring beads at all periods. This is no doubt ostrich egg. Tubes of *Dentalium* shells were sometimes threaded with beads (1664), and coral is also found (1500, 4604).

The piercing of the hard stone ring beads was done with a small flint point (QUIBELL and GREEN, *Hierakonpolis II*, p. 12); the funnel-shaped apertures are shown in the drawings. The cylinder beads in the softer stones have, however, a tubular perforation which may have been made with a metal borer, as it is often very small. See Section 56.

The forms 86u₃, u₆, u₉, are quite new. All are in carnelian, and all have seven facets very carefully cut. It is surprising to find such beads at this early period, but one of the graves from which they come was quite untouched, and there is no possible doubt of their age. One pair is of s.D. 44-60, and another of s.D. 43-46.

The form 89f₉, of serpentine (s.D. 56-70), is classed by Professor Petrie as an amulet, probably a claw (*Amulets*, p. 13; pl. ii, 24d-f).

120. Mr. Horace C. Beck has sent me the following report on some Badarian glazed steatite beads which were submitted to him. He has compared them with similar beads from graves 1587 and 1871, of s.D. 31 and 47 respectively. He writes: "The differences that I have pointed out are mostly small, and I do not think are necessarily sufficient to point

to a different civilisation. The general impression I get is that the Badarian beads are decidedly better made than the Predynastic beads, but I know that the latter came from poor graves, one grave only having one pot in addition to a short string of beads."

REPORT ON BADARI BEADS

The material on which the beads were strung was flax. It is now extremely dark, and when mounted in Canada balsam shows many dark bands in the fibres, whilst late Egyptian flax from a robe (probably Ptolemaic) becomes absolutely transparent and almost invisible when mounted in the same way. This darkness may be due to age or it may mean that it was dyed before using.

The stiff material on which the shell was strung is hair. I am not able to say from what animal, as I have not had hairs of sufficient different animals to compare. The diameter is .046 inch. I have a specimen of hair from the tail of a giraffe which is the same diameter and general construction, but is much darker. The hair used was comparatively light brown. I have modern beads mounted on similar hairs, but I am not certain what hair they are; they are reported to be elephant, but I doubt it.

I think the material the bead is made of is steatite. It is the same material as some of the glazed beads from Naqada. There are, however, very decided differences between the beads I have examined. In the Badarian bead, the glazing seems to have affected the whole of the core, whilst in the other bead, which is dated to S.D. 31, the glazing only seems to have affected a portion of the core, the core nearer to the glaze being considerably more opaque than in the centre.

The glaze in the Badarian bead is far more crystalline than in the S.D. 31, and polarises much more.

The Badarian bead does not fracture so easily, the glaze does not break away so much in grinding, the core is much more regular, and the external condition is better than the S.D. 31.

The dimensions of the two beads chiefly examined are as follows:

	Badari.	S.D. 31.
Diameter of bead . . .	.078 inch	.072
Diameter of hole . . .	.030	.035
Thickness of glaze on outside . . .	.0025	.0015
" " round hole . . .	.004	.001
" " at ends . . .	.001-.0015	.002

From this it is seen that the glaze on the Badari

bead is much thicker than the other except at the ends, where it is thinner.

121. Mr. Beck later sent me the following report on three Predynastic beads from grave 3740 at Badari (S.D. 38-44).

Of the three beads, one is comparatively new, that is, shows scarcely any signs of wear. The second is broken and shows great wear all over, including the broken surface. The third is complete and is also much worn.

The dimensions of the beads are as follows:

	1	2	3
Length . . .	.0785	.112	.1455
Diameter, oval . . .	.0165-.1072	.1065-.109	.1075-.108
Diameter of hole :			
Large end . . .	.052	.048	.051
Small end . . .	.046	.041	oval .048-.042

The thickness of the glaze has only been examined on the first two. The first, which had a very fine colour, has a decidedly thicker glaze than the Badarian bead examined previously, whilst the second has a very thin glaze, much thinner than the figures below suggest, as the thick parts are where there are small irregularities in the steatite core which have been filled with glaze.

	1	2
Thickness of glaze :		
Outside . . .	.0042-.006	.0-.0025
Inside hole . . .	.0038-.005	.0-.003
At ends . . .	.0038-.0041	.0005-.002

It appears, therefore, that the thickness of the glaze is not a matter to judge the date of the beads from.

The quality of the glaze in these beads is the same as in the S.D. 31 beads that I examined before, and is not like the Badarian. Before, however, laying too much stress on this, I should like to cut up another Badari bead.

Mr. Beck in his general report on some of the Qau and Badari beads of all periods (*Qau and Badari II*) has made a few further remarks on some of the Predynastic beads.

CHAPTER XVII

MISCELLANEOUS PREDYNASTIC OBJECTS

122. *The Stone Vases.* Pl. li. The sequence dates have been placed at the top left corner of each drawing. Little comment is necessary here, as the subject of stone vases has been fully dealt with in

Prehistoric Egypt, Chapter X. The tall basalt vases with foot, 5-7, are an interesting type. There is a possibility that this is derived from a milking vessel, if not actually used for that purpose. Among the East Coast tribes of South Africa, a wooden milking-pail of identically the same tall unstable form is used, with the same curious conical foot. The handles, which are placed in the same position on the sides, are ledges and not pierced. A connecting link is seen in WOOLLEY and MACIVER, *Karanog IV*, pls. xxvii, xxviii, where the same shape, but made of basket-work, is seen in use for milking.

The squat vases with tubular handles, 11-15, are rather widely dated from s.d. 44 to 64; two of them are unfinished. In 12, the body is left with flat faces running round which have never been ground off, and in 13 the handles have not been pierced. What seems to be the latest in date, 15, has had its rim broken away, and the edge ground smooth. The tomb in which the large wavy-handled alabaster vase, 31, was found is published in *Q. and B. I*. It is one of those which falls into the overlapping period of s.d. 77-80.

The curious little basalt vase 33, with incised decoration round the neck and on the rim, is closely like that at University College (*Prehistoric Egypt*, pl. xxxvi, 49; xlii, 220). The Qau example is probably about s.d. 57-58, judging from the other graves in the cemetery; the pottery found with it ranges from s.d. 44 to 60.

123. *The Slate Palettes*. Pl. lii; others pls. xxxiv, 3, 4; xlvii, 4-6. Very few of these are of any new importance. The decorated rhomb, 11, is very unusual. There is no exact parallel to the row of indentations at the top; they are rather like the example in *Naqada*, pl. lxii, 41. The festoon of bead-holes is like that on the little palette, type 31, in the *Corpus*. This palette is also remarkable, coming as it does from a village area and not from a grave. These rhombs are the prevailing type of palette in the Early period, and are found up to 3 ft. in length (one at a Luxor dealer's). No. 4 has the figure of a quadruped incised upon it. No. 15 has a projection which may have served as a handle. No. 16 is a strange fish-like form, but quite distinct from the usual fish such as 17, 19.

Mace-heads. Pls. liii, 1-15, xxxiv, 5; others pls. xlvii, 6, and lviii, 6. Most of these are of the early disk type, and run on in date to just after s.d. 40 (1-7, and pl. xlvii, 6 of s.d. 37-38). No. 7 is a model of this form in polished red pottery.

The pear-shaped mace-heads are poorly represented by five examples, 11-14, and the glazed quartz head from the temple area, pl. lviii, 6. This last example is not dated; the others are from s.d. 43-62. No. 15 is a most unusual shape, of s.d. 34; it is almost intermediate between the disk and the pear forms. No. 8 is an interesting instance of a mace-head in pink limestone with three small knobs.

The long pointed mace-head, 10, is of s.d. 53-60, later than all other dated examples of this class (*Prehistoric Egypt*, p. 23).

124. *Combs*. Pls. liii, 31-33, 43, 44, xxxiv, 4, 6; another pl. xlvii, 6. Three of these are of the variety with long teeth, all Early. The earliest, 33, has a plain top. Next comes the antelope, 32, of s.d. 33-42, very like the example from Naqada (pl. lxiii, 60) of s.d. 33. The third is closely like that in *Prehistoric Egypt*, pl. xxix, 11, undated.

The other three are of the amuletic kind, pierced for hanging, and with a row of serrations rather than actual teeth. The long incised line and the serrations are picked out with black paint. The example in pl. xlvii, 6, is the earliest known, being of s.d. 37-38; the other two, pl. liii, 43, 44, are round about s.d. 40.

Hairpins. These are represented by four examples, pls. liii, 20, 22-24, xxxiv, 4; all are round about s.d. 40. The bird-headed pin, 20, with its pitted ornamentation, is a new type; so is the ostrich, 22; the gazelle, 23, is just like the pin in *Prehistoric Egypt*, pl. viii, 1; and the flat hairpin, 24, like a paper-cutter, is the same type as in pl. viii, 20. The latter specimen from grave 1293 at Naqada is of s.d. 61-72, and does not therefore agree with the date of the Qau pin. The fox in ivory, 21, is puzzling. It can hardly have surmounted a pin or comb, but might have lain on a spoon-handle. The points of ivory pins were found in five other graves.

Finger Rings and Bracelets. Most of these were of ivory, and very fragmentary. The best are drawn on pl. liii, 34-39, and two are photographed, pl. xlviii, 6. All are flat on the inside and slightly convex on the outside. No. 34 is unique in having a groove running round one side; it has had three holes bored in it, though not for mending purposes, as one of them has caused a crack, and the other break has one hole only beside it. The ivory bracelets are dated from s.d. 33 to 47; there is a bone one of s.d. 53-59; and shell bracelets, which

may be quite early, as in grave 1743 (s.d. 31-34), eventually became the common style of bracelet in the late seventies. Finger rings are all of ivory, and are of the same period as the ivory bracelets.

125. *Tusks and Tags*. Pls. liii, 16-19, 25-30, xxxiv, 4; others pls. xlvii, 4-6, xlviii, 6. The tusks are either solid or hollow. In 2064 the single tusk was solid, and undecorated, as far as could be judged. In the pot 3165 (s.d. 37-38) was a solid tusk, 16, with a groove round the wide end, and a bearded head with loop on the top, at the pointed end. In 3828 (s.d. 44) were three rather similar tusks, two plain with loop, the third without loop but with two eyes and sloping lines incised in black, evidently the last vestiges of the human head. In 3802 (s.d. 37-42) were two little tusks, pl. xlviii, 6, one solid with a groove, the other hollow and perforated at the wide end; both are slightly decorated at the point. In 1519 (s.d. 43-46) were three small hollow tusks, pierced for suspension or for affixing a cover. A large hollowed pair were in 3759 (s.d. 39-44), 17, pierced and also decorated; and a tusk of rather different type, 18, pierced and decorated, comes from 3829 (s.d. 41-48). See Section 127 for a suggestion as to their purpose.

The ivory tags were usual objects, both in the graves and in the village hoards; thirty-three were found, in all. Eight came out of the pot 3165, pl. xlvii, 6, and five from the pot 3284, pl. xlvii, 4. The remainder were all in pairs or threes, except two single ones from graves 113 and 3804, both disturbed. There were six pairs and two threes. The eight from 3165 group into one three, two pairs, and one odd; but the five in 3284 seem to be odd ones. All the tags are provided with a groove at the wide end; that on pl. liii, 25, when intact, was no doubt the same. One, 30, also has a round hole, but this is unusual.

The decoration of both tusks and tags consists of horizontal lines in groups, especially at the tip; of zigzags; and of notches down the sides. Three tags in 3165, pl. xlvii, 6, are of a new form with a flat knob at the pointed end. Probably the ancestors of all these tusks and tags were anthropomorphic, and the knob is the survival of the head. We can see how the zigzags might just possibly derive from the hair and beard in 16; but this is only a suggestion. For a description of all hitherto known tusks and tags, and for their method of use, see *Prehistoric Egypt*, pp. 33, 34.

Of the round stone tags (for plugging water-skins?), one example, in pink limestone, comes from area 3200 (pls. liv, 6; lviii, 5), and another of limestone just like it from grave 3828.

126. *Animal Amulets*. Pls. liii, 42, 49, 50, xxxiv, 4. The set of three ivory animals, presumably intended for hippopotami, are new to us in this material. The projection on the back is probably for attaching a cord, as they are not pierced for suspension. If this is so, they would have hung right way up; this is not by any means always the case with amulets. Cp. the figures of hippopotami in *Pre. Eg.*, pl. ix, 29-31. A small Badarian hippopotamus amulet found at Mostagedda in 1928 has the projection; it is here quite independent of the piercing for suspension.

The ivory hartebeeste amulets, 49, were also in a set of three, one much broken. The eyes are filled in with black paste, and inlaid with shell beads. They are pierced for suspension upside down. No. 50 is a very poor example of the same amulet in limestone, with two holes for suspension. The projections under the horns may be intended for ears; but some specimens have as many as three on each side (*Pre. Eg.*, pl. xlv, 103; pl. xlv, 1-6, 40, 41; p. 39).

The occurrence of tusks, tags, and amulets in sets of three is noteworthy. Other cases are the slate and bone amulets (PETRIE and QUIBELL, *Naqada*, pl. lix, 2, 8), the tags (*ibid.*, pl. lxii, 19), and the tags in grave B75 (MACIVER, *El Amrah*, p. 24).

Shell Hook. Pl. liv, 4. This comes from an Early Predynastic grave at Qau. There are two examples from Naqada (pl. lxiv) of s.d. 38, and others are figured in *Prehistoric Egypt*, pl. xxx, 18-20, p. 43; *Amulets*, pl. ii, 25g.

Forehead Pendant. Pl. liv, 3. A well-made scoop of shell, pierced for hanging, came from the plundered grave 3705, undated. Similar pendants are figured in *Amulets*, pl. xvi. See *Pre. Eg.*, p. 41. The date of the Qau example should be s.d. 54-61. It is not curved to fit the head.

127. *Wands*. Pl. xlviii, 1. A pair of wooden wands, which may perhaps be castanets, were found in the plundered grave 3826. They are 13 ins. long in their present state; the handle-end is apparently broken off. Down the centre run three fine parallel incised lines. There is no other decoration, the white patches seen in the photograph at the upper end being marks of adhering matting. A wand

in ivory of very much the same shape was found in the tomb of Zer (PETRIE, *Royal Tombs II*, pl. via, 8), but this is very much smaller, only one-third of the size of the wooden ones.

Carved Horn and Snuff-spoons. Pl. xlviii, 2; pl. liii, 40, 41. In grave 3804 of S.D. 52-59 was a natural horn, with the point roughly carved into the head of some animal. The open end was originally closed by means of a cover or plug fastened down through the holes in the rim. A slit has been cut in the side of the horn, near the head, to admit of the contents being extracted, while a little hole opposite to this is for the insertion of a string to hold a stopper for the slit, now missing. With it was the tiny ivory spoon, pl. liii, 40, which seems to have been used for taking out the contents, by way of the slit. Wainwright, in describing a similar horn of pottery found by him at Gerzeh, of S.D. 58, with pottery plug or stopper for the slit, points out its close resemblance to the Basuto snuff-horns of the present day (PETRIE and WAINWRIGHT, *Labyrinth, Gerzeh, and Mazghuneh*, p. 23, pl. vii, 13). To this it may be added that the Basutos use small spoons, generally made of horn, when taking snuff. In the Cairo Museum (No. 4240, *Guide* 1915, p. 449) is a horn of wood; the wide end is plunged with a wooden stopper. On the point is fixed a bull's head finely carved in ivory; on the head is a circular spoon-bowl which is placed there to catch the contents when they issue from a small hole in the top of the head. There is no history to this object; but it seems to be a very much later example of the snuff-horn. Other horns of this class are figured in PETRIE, *Qurneh*, pl. xxv, and *Illahun*, pl. xxvi, both of the xviiith dyn. It has been suggested that these horns are feeding-bottles; in the British Museum are two kneeling statuettes of girls in polished red pottery, with a baby under the arm and a similar horn in the lap (*Guide to the Fourth, Fifth, and Sixth Rooms*, 1922, pl. vii, 24652, 54694); but these horns are quite different by not having a slit in front.

Whether the Predynastic people actually used snuff we cannot say; but the conjunction of the horns and spoons is very strong evidence that they did. It has also been suggested that these horns may have been used in the same way as the horns of some of the Congo peoples, which are filled with herbs or animal substances to endow the wearer with the powers of those plants or animals (Wellcome

Historical Medical Museum). This, however, seems to be a more likely use for the hollow ivory tusks, which were closed by means of a cover or stopper at the wide end and had no slit by which the contents could be extracted.

128. *Games.* Pl. xxxiv, 1; liv, 5. Thirteen marbles came from grave 102; this had been robbed, so the set may not be complete. Six are of grey, and six of white limestone; the thirteenth is pink, and of a pointed pear shape. It is rather tempting to suppose a game with the pink marble as the jack, and six marbles to play with, on each side. The set of marbles from Gerzeh (PETRIE and WAINWRIGHT, *Labyrinth*, pl. iv, 4, p. 23) vary so much in size that they could not have been used in such a way; and the published details of other sets do not bear out the idea of a game of bowls (*Pre. Eg.*, p. 32). The little syenite bar, pl. liv, 5, is from a ninepin game (see PETRIE, *Naqada*, pl. vii).

Weapons and Tools. Two examples of the single-barbed harpoon are shown on pl. liv, 1, 2, and pl. xxxiv, 4, 6. Both are of bone; neither is dated. Other examples are of S.D. 44-46 (*Prehistoric Egypt*, p. 24).

Copper pins are of the loop-head type (*Tools and Weapons*, pl. lxxv, 106, 107) from grave 3, S.D. 31-38; of the type with the end of the loop wound round the stem (pl. liv, 9) of S.D. 52-61; or plain (grave 3822, and areas 3000/3 and 3200, pl. lviii, 5, 6).

A copper needle was in the large pot 3284 (pl. xlvii, 4). A copper netting-hook (?), pl. liv, 8, was picked up in Cemetery 3800. In grave 3932, that of an adult male, there was a little awl of copper, with some leather thong wound round it (*Q. and B. I*, pl. xlii).

Bone awls made from a bird's femur come from the village sites (pl. lviii, 5, 6); and five were found put away in a black-topped pot (2078). A bone needle (pl. liv) is undated; it came from grave 1690. Two were in the pot 3284, S.D. 37-38 (pl. xlvii, 4). A long bone bodkin and a shorter one (pl. xxxiv, 4) were found stored in a black-topped jar (1902). The bone hook, pl. liv, 11, is unusual.

129. *Human Figures.* Pls. liii, 45-48; xxxiv, 4, 6; pl. lviii, 5. The male head, 45, of painted clay, is crude in most respects, yet the muscles of the neck are indicated with surprising care. The face is coloured red, the hair black, and the eyes and teeth white. The female figure, 48, comes from the same cemetery as the head, but I think belongs to the Early period. The head and shoulders

resemble the Badarian mud figure, pl. xxiv, 3, to some extent; and the narrow waist is like pl. xxiv, 1. On the back is a large fan-shaped tatu-mark, which is not like any other of the marks on Predynastic figures (pl. xxxiv, 6).

This little figure, 47, of black clay, comes from a village area (pl. lviii, 5). It contrasts strikingly with most other statuettes of the age, being of naturalistic work and well proportioned. The arms are omitted, as they so often are, owing to the unsatisfactory nature of the material used; but details are carefully rendered, including the dimples in the lumbar region, like those on the Badarian statuette (pl. xxiv, 2). The type is not steatopygous, thus differing markedly from the fragment, 46, in the same material (pl. lviii, 5), also from a village. The curious little figure from Cemetery 3700 (pl. xxxiv, 4) is made of the roughest clay, and consists of two parts, back to back, joined by straw pegs, leaving a small space in between. The work is so rough that we cannot be certain whether the salient points are arms and breasts, or ears and eyes. The remaining human figure has been referred to in the description of grave 3740.

130. *Model Boats*. Pl. liv, 18-20. Parts of boats in pottery and wood were found in graves 3812 and 3823; they are referred to in Sections 106 and 107. They were both quite fragmentary. Little models in blackclay are drawn here, and one is photographed, pl. lviii, 5. This last came from a village; it has two holes in each thwart, presumably for the attachment of rigging. Of the other two, found loose in cemeteries, one is perforated vertically through the stern (for a mooring rope?). For an account of early Nile boats, see BATES, *Harvard African Studies I*, 1917, p. 199.

Pottery Lamp. Pl. liv, 21. Photograph in *Qau and Badari III*. This unique object is of rough dull red pottery, with a spout at one side, and little lug handles on the other three. It came from the Predynastic village at Hemamieh. The inside is covered with a thick greasy black deposit, and this fact, together with its form, strongly suggests that the object was a lamp. If this is so, it is by far the oldest so far found in Egypt.

Pierced Pottery Disks and Stone Whorls. These are catalogued in the details of the village deposits, Chapter XII.

Spatha Shells are found frequently in the graves of all periods. They are recorded in the Register, and need no further comment here.

CHAPTER XVIII

THE PREDYNASTIC FLINTS

131. Photographs of the flints will be found on pls. xxix, 3; xxxiv, 1; xlvii, 3, 5, 6; xlviii, 6; lvii, 1-6; and lviii, 5. Drawings of all the principal types of village flakes are given on pl. lvi.

Forked Lance-heads. Thirteen were found, all in cemeteries. Five are given in pl. lvii, 1, all Early Predynastic. These show the shallow curve between the points, and two of them have the projections which prevented the slipping of the lashing which held them to the haft (?). The specimen from 154, which widens slightly behind the points and has a shallow curve, is a new and perhaps the earliest form. The latest that we found is shown on pl. xxxiv, 1. This has the pointed notch between convex curves, and the sides are serially flaked; it can only be dated widely, to S.D. 44-61.

Rippled Knives. These beautiful implements are much sought after by the modern native, and we found none perfect. In grave 102 was a broken knife of which we recovered all the pieces (pl. xxxiv, 1); it is shown with its back upwards to illustrate the way in which it is ground smooth on that side and not rippled as on the front. Another in honey-coloured translucent flint, not quite complete, was in grave 1647. Pl. lvii, 2, shows two portions of a third, one of them reversed to show the work on the back; it is a late example of S.D. 57-66.

Other Knives. These come from graves 124 and 131 (pl. lvii, 1), 1903, 3715, and 3752 (pl. lvii, 2), all Middle Predynastic; cemeteries 3800, 3900 (pl. lvii, 3); villages on spurs 3 and 6 (pl. lvii, 4); and from the pot-hoard (two, pl. xlvii, 3) of S.D. 37-38. Four of these are fragments only; one is a flake with very little retouch (131); another is quite rough (spur 3). Of the remainder, the pair from the pot 3284 are fine examples of the Early comma-shaped knives. Similar examples are from Naqada (pl. lxxiv, 85, of S.D. 35-39), and from Nubia (REISNER, *Arch. Survey of Nubia*, 1907-8, pl. lxii, b22, 23, of S.D. 37). The very curious type from grave 3752 (pl. lvii, 2), with the little notched tang of S.D. 58-60, is like the crystal knife from the tomb of Zer (PETRIE, *Royal Tombs II*, pl. vi, 8). The knife or dagger from spur 6 (pl. lvii, 4) is closely like a Badarian form (pl. xxvi, 5120), but coarser in workmanship.

132. *Arrow-heads*. These are all of the winged type, and all come from village sites on spurs 2

(one), 3 (two), 6 (two), and 10 (one). All except the last are of the long form with straight wings (pls. xxix, 3; lviii, 5). The specimen from spur 10 (pl. xxix, 10), with curved flat-ended wings, may be Badarian, as Badarian sherds were found close by, on the next spur, 11. The strange form (pl. xxix, 3) may be a tanged arrow-head; it is of the thinnest flint and quite unlike any other arrow-head.

Flakes and Scrapers. The principal varieties of these are shown in groups of three in the photograph, pl. lvii, 5 and 6. The former are from village sites at Badari, and the latter from Hemamieh. The types are also drawn on pl. lvi, 4-16, so that a clear idea may be formed of their nature and style. A very few were found in graves; these include the sickle flint from 140 (pl. lvii, 1). The hoards in pots contained many flakes (pl. xlvii, 3, 5, 6, and 2064, pl. lvii, 2), but the great majority come from the village rubbish. Most of these forms occurred also in Miss Caton-Thompson's site north of Hemamieh, and are referred to in her report.

CHAPTER XIX

IDENTIFICATIONS OF PRE-DYNASTIC SPECIMENS

133. *Shells.* The following have been identified by Mr. T. Wilfred Jackson, M.Sc., of the University Museum, Manchester:

Ancillaria cinnamomea (Lam.). 100/2, 3900.
sp. 100.

Cleopatra verreauxiana (Brongniart). 3284(3).

Conus (*Chelyconus*) sp. (near *cocceus*, Reeve).
3284(2).

(*Coronaxis*) *punctatus* (Chem.). 3284(2).

(*Cylinder*) *textile* (L.). 3284(7).

minimus (L.). 100.

(*Nubecula*) *striatus* (L.). 3284.

Cypraea arabica. 3284.

Jopas sertum (Brongniart). 3284.

Mutela dubia (Gmelin) = *nilotica*. 3284.

Natica mamilla (L.). 3284(21), 3900, 3901.

cf. *maura* (Brongniart). 3284.

cf. *melanostoma* (Gmelin). 3742.

Nerita albicilla (L.). 139(22).

polita (L.). 139(2), 3284(2), 3812.

sp. 100.

Olivella sp. 139(2).

Ostrea sp. 3812.

Planaxis sulcatus (Born.), var. *savignyi* (Desh.).
3284(3).

Purpura (*Thalessa*) *tumulosa* (Reeve). 3284.

Spatha rubens (Lam.). 101.

Trochus erythraeus (Broc.). 3284.

Turbo petholatus (L.), probably. Shell bangles
100/2, 1790.

Unio aegypticus (Fér.). (Desh.) 3284.

Mr. Robson, of the Natural History Museum, South Kensington, has identified the following:

Cleopatra bulimoides (Olivier). 133.

Zootecus insularis (Ehrenberg). 133.

One other has been identified by comparison with the collection at University College:

Mitra maculosa (Reeve). 100/5.

All these are Red Sea shells with the exception of the *Cleopatra*, *Mutela*, *Spatha*, *Unio*, and *Zootecus*, the habitat of which is the Nile Valley.

134. *Botanical Specimens.* The following report is from the Director of the Royal Botanic Gardens, Kew, who states that, on account of the nature and condition of the specimens, precise identification of the specimens is for the most part impossible.

3000/3. Wooden stakes from dwellings under the temple. Apparently wood of *Tamarix* sp.

3000/3. Other samples. Apparently *Tamarix* sp.

3000/3. Contents of pot P64h in group i. Chiefly sand with some fragments of pottery, a few seeds of *Asphodelus fistulosus*, and some other seeds and charcoal (not identified).

3000/6. Charcoal from settlement. Three pieces appear to be *Tamarix* sp.; three other pieces not identified.

3165. Contents of large pot. A trimmed piece of wood of *Pinus* sp., small pieces of wood of *Cedrus* sp., one grain of wheat, pieces of grass-stems, a dicotyledonous wood, charcoal, bark, and resin (not identified). See also below.

3284. Contents of large pot. Chiefly sand, one grain of wheat, small pieces of Coniferous wood which appears to be *Cupressus* sp. (or *Juniperus* sp.), and bark and charcoal (not identified). See also below.

3700. Contents of pot W19. Not identified.

3740. Two pieces of wood, apparently *Tamarix* sp., one piece of probably a Rubiaceae wood, and matting made chiefly of leaves of a grass.

3800. Wood not identified.

3800. Wood from graves. Not identified except for some small pieces which are probably *Tamarix* sp.

3924. Basket made chiefly of grass-stems.

4606. Coniferous wood, apparently *Cupressus* sp. or *Juniperus* sp.

4615. Wood apparently of *Tamarix* sp.

3165 and 3284. Some other specimens, not of a

vegetable nature, are tentatively named as follows : two flint flakes, copper ore, coral, shells, Echinus, small crab's claws, hair of goat or cow, pellet-like bodies apparently the dung of a herbivorous animal, the pellets being perforated (for a necklace ?). See further below.

135. Mahmud Abaza Bey, Director of the Horticultural Section of the Egyptian Ministry of Agriculture, has sent me the following report on botanical specimens.

3000/3. Lowest stratum. Capsules of a species of flax. These capsules are smaller and with deeper ridges than those of the common flax, *Linum usitatissimum*, which is now cultivated in Egypt.

3000/6. Contents of the large pot T9. Pods and seeds of gilban (*Lathyrus sativus*). This plant is used in Upper Egypt as a fodder plant where bersim is not grown. Some of the natives still use it as a vegetable like beans or peas. The pods and seeds of the specimen are of about the same size as the variety now grown.

3197. Basket. Pieces of the stem of a fibre plant. These pieces are not very brittle and the fibres have kept some of their elasticity. The plant is clearly dicotyledonous, and it is very likely that they belong to the above species of flax (3000/3).

3284. Contents of pot T11. Bark of a tree, possibly sandal or cinnamon. Both plants are foreign to Egypt. Complete fruit of dom-palm (*Hyphaene thebaica*). This specimen is smaller in size than those of the cultivated doms, but is similar to the fruits of the plants growing wild near the Kharga Oasis.

3823. Contents of pot R23g₂. Same as 3840, but mixed with pieces of wood from a different plant.

3840. Contents of pot R66a₂. Tubers of Hab-el-aziz (*Cyperus esculentus*). The tubers of this plant are still eaten in Egypt because of their sweet taste. The size of the ancient specimens is somewhat smaller than those seen in the market at present. The skin is well preserved, but has become black in colour. The interior which contains the sweet substance has disappeared.

3924. Contents of pot W21h. Pieces of bread. The masses are porous, showing that probably the use of yeast was known. The material of the bread is not very homogeneous.

Mr. A. Lucas, reporting on certain samples of resin from the graves 100, 119, 136, 1673, 1713, 3740, and 3828, states that these are all true resins of a type fairly common in Predynastic and Early

Dynastic times. The botanical source has not been identified.

136. Professor John Percival, M.A., Sc.D., of University College, Reading, has examined three samples of grain.

2000. Contents of pot R81l. This is the primitive Emmer Wheat (*Triticum dicoccum*); the portions of the ears and grain are quite characteristic.

3000/6. Contents of pot T9. Not identified.

4612. Contents of pot R84d. Not identified.

The date of the pot R81l which contained the wheat cannot be stated very definitely. The village in which it was found and to which it had belonged was of about S.D. 37-44, if all the Predynastic remains are taken into account; but there were also some Badarian pots, and the ground was probably more or less continuously occupied, like that worked by Miss Caton-Thompson north of Hemamieh. Its most flourishing period was the Early Predynastic. One grain of wheat was identified at Kew from among the contents of each of the pots 3165 and 3284 at Badari, both these are of S.D. 37-38. There seems good reason to believe, therefore, that wheat was commonly known in the Early period. The grain from pot R75g₂ was not able to be identified. For some notes on emmer and wheat, see L. B. ELLIS, *Ancient Egypt*, 1923, p. 18.

It is to be noted that some of the specimens of wood from the Predynastic villages and graves are varieties of pine, cedar, and also apparently cypress or juniper. We have no evidence that these trees ever grew in Egypt, or that the climate at this time was suitable for them. It is therefore evident that even at this early time, timber was traded from Syria to the Nile Valley. In 1860 all these trees grew together near the sea in the Lebanon district (NEWBERRY, *Egypt as a Field for Anthropological Research*, p. 14).

137. Miss Winifred Blackman has sent me the following remarks on the fragments of Predynastic basketry which are shown in photograph pl. lx, 10-15:

"All the above specimens show similar technique, the work being the same as in many modern Egyptian baskets. The foundation consists of a number of splints sewn over and over with a more flexible material, probably palm-leaves split longitudinally to the required width. Such baskets are built up on a spiral coil, as at the present time. Nos. 3740 and 4604 are very fine work, similar to modern baskets I have seen made in the Oasis of Farafara.

At the present day such baskets are made by both men and women. The foundation of splints is made of the stalks on which the dates grow, or of mid-ribs, each stalk or mid-rib being split longitudinally. The oversewing is done with palm leaves, similarly split. An iron needle is used for the sewing; in ancient times a wooden one was probably used."

CHAPTER XX

THE TEXTILES AND MATTING

By THOMAS MIDGLEY

THE TEXTILES

138. The structure of textile fabrics of the earlier dynastic period in Egypt is now fairly well understood, and the character of the loom and its accessories equally well known. The series of dated cloths of the iird to vth dyn. from Medum, the extensive and dated set of examples from Kafr Ammar, and other finds of great interest but of a more restricted range of time, have been so far analysed that the material of which the yarn is made, its preparation, counts, relation of warp to weft, and other structural information is available in considerable detail. From the tomb-paintings at Beni Hasan, El Bersheh, and Thebes we have learnt how the flax stem was treated to obtain the bast fibres, how these were cleansed, heckled, roved, spun, and warped. Finally, we have in these pictures the breast and warp beams shown pegged to the ground, lease rods and heddles inserted, and the weaving of cloth from these carefully prepared yarns.

No reed was used, so that throughout the whole range of dynastic cloths there is a great irregularity in the spacing of the warp threads as compared with modern fabrics; in the same piece of cloth the number of these strands may vary widely, the number of weft threads being far more constant.

Apart from this, it is singular how little within the range of plain weaving which is known to-day was not practised by the weavers of the Old Kingdom. Doubled yarns were used—and are shown in preparation in one of the Beni Hasan groups—where a close strong fabric was needed. Parallel warps and wefts in one shed, the modern "canvas" weave, were frequently employed, and lace-like fabrics woven, as is the practice to-day, of over-twisted warp yarn, which, snarling into hurts, kept the distant weft threads in position. Some examples of perfectly made poplins show that this weave,

popular in our own day, was not beyond the capacity of the weavers of the Early Dynastic period.

Thus at the very dawn of the historic period in Egypt we find the craft of the spinner and the weaver very highly developed in technique; manifestly the early stages of the evolution of the loom must be sought far back in the Predynastic era.

Practically the only examples of fabrics of this period which have been examined were the few bits found by Mr. Wainwright at El Gerzeh, and reported on by Mr. W. W. Midgley in *The Labyrinth, Gerzeh, and Mazghuneh*, 1912. This material was all in such an extremely rotten condition that the desirability of access to other examples, in better condition and of more diverse character, is apparent from the published report.

139. The textiles found at Qau and Badari in 1923 and 1924 are therefore of much interest in such an enquiry. The objects associated with the fragments serve to fix their relative age, so that their range in time is definitely established as Protodynastic, Predynastic, or Badarian. Sufficient material from each epoch is available to determine the salient characteristics of the three periods, and, though the fabric is in all cases decomposed and friable, it was possible to prepare samples from each group sufficiently large and well preserved for examination. In most cases the fragments were closely matted together. No attempt at separation of the layers could be made whilst in a dry state, as they crumbled at the very slightest touch. After floating in water or very dilute alcohol it became possible, with infinite care and patience, to flake off the layers and transfer them, by floating, to stiff paper sheets. After drying, some were preserved by coating with a very dilute solution of celluloid, but the microscopic analysis was made on untreated fragments.

Photographs were taken of selected portions, under masks $\frac{1}{2}$ in. square, magnified to 3 ins. square, so that the relative diameter of the yarns and the number of warp and weft yarns per inch, the character of the weave, etc., can easily be compared.¹ Owing to the decomposed state of the fibre, it was not possible to obtain thin cross sections of the yarns. The diameter of the ultimate fibres of the flax varies enormously, according to the degree of retting and heckling of the material, and it was not considered profitable to measure these in detail. The

¹ The photographs are reduced to $\frac{1}{8}$ in the plates, or 16:3 of actual size.

flax is certainly different from that used in later Egyptian fabrics, the ultimate fibres being thicker and not so supple. In all the pieces examined, the retting and other preparatory stages had been very thoroughly carried out; even in the Badarian examples no trace of undecorticated bast was seen. (Here follows sect. 173 of *Qau and Badari I* on the Protodynastic specimens.)

140. No. 4620 (pl. lix, 10-12; pl. lx, 1, 2) has 88 warps and 50 weft yarns to the inch. It is fairly well preserved, though cracked through in several places by sharp folds. However, it clears up some disputed points and gives much definite information. It has a perfectly formed selvedge on each edge, so that the full width of the cloth, 5.1 ins., is known. The selvedge is conclusive proof of a continuous weft put through the shed as a spool or ball and returned from side to side of the loom. This being so, the yarn was either "single" or "doubled"; it manifestly could not have both characters. On the assumption that the weft was put in as separate short pieces, some of these early cloths were said to have a certain number of wefts per inch "doubled," a few perhaps "trebled," and the remainder "single" yarns. Such an idea is now untenable. Many of the strands *appear* to be doubled yarns, but by following their course for some distance it is clear that the effect results from the untwisting of the spun yarn in those places where the whirl of the spindle has overtwisted the strand. An examination of other fabrics of this period has not yielded a case of a yarn formed by the intentional twisting together of two separate strands.

From edge to edge of the cloth there is not a single dropped warp, and it appears to be the end of a "piece"; the warp threads project about $\frac{1}{2}$ in. beyond the woven part. The crowding together of the warp towards the edges of the cloth shows that no "temple" or other contrivance was used to counteract the pull of the weft as it passed to and fro across and round the warps.

The Badarian cloths, 5100 (pl. lix, 1-4), 5101 (pl. lix, 5), and 5110 (pl. lix, 6-9), have a similar structure to the Protodynastic examples, the weft not beaten up and at varying angles in relation to the warp. The yarns are in all cases doubled, two separate strands being closely twisted together, forming a thick yarn with a corrugated surface. It may be that a heavier fabric was desired or perhaps the doubling was designed to lessen the tendency of one set of threads to slip over the other so readily

as when a single yarn with a comparatively smooth surface was used. One small fragment (pl. lix, 2) shows the edge of the weave. It is much decomposed, but shows the warps closely packed as in the Predynastic example 4620, again indicating the absence in the loom of a "temple." At the end of the fragment two weft threads can be seen returning into the following shed to form a selvedge as in the somewhat later example mentioned. The projecting weft on the other portion of the edge has powdered away. But this tiny bit is clear proof that, even in Badarian times, the weft was a spun yarn of considerable length, passed as a ball or spool from side to side of the loom through the warp shedding, and so formed a true selvedge to the weave.

The sample 103 (pl. lx, 4), sent as Predynastic, has the structural character of the Protodynastic and Badarian weaves, and is unlike any other cloth of the Predynastic period I have examined.

The detailed examination of any other examples of these extremely early fabrics may clear up some points in the evolution of the loom and its products. The few pieces of Badarian cloth now available show quite clearly that the technique of the weaves at this remote epoch was remarkably high, and that the beginning of the manufacture of textile fabrics similar to the plain weaves of a modern hand loom is much further back in the history of man.

141. *Sample 1.* Badarian 5100 (pl. lix, 1). Linen. Plain weave. Picks 34×22 . Ratio warp-weft 2 : 1. Colour dark brown. Yarns doubled, those of the warp tightly twisted. The amount of twist in the weft is much less, allowing these yarns to spread and form a more compact-looking cloth. This effect is not at all due to beating up the weft in weaving.

Sample 2. Badarian 5100 (pl. lix, 2). A fragment showing a portion of the selvedge of the cloth. The edge is very decomposed, but two or three weft threads are clearly returned into the next "shed." The warp yarns are crowded together near this edge, but the weft is again very open and not beaten up. All the yarns are doubled and strongly twisted.

Sample 3. Badarian 5100 (pl. lix, 3). Linen. Plain weave. Picks 20×20 . Ratio warp-weft 1 : 1. Colour black. Appears to have been charred. Both the warp and weft doubled and regularly twisted. The weft is at a slight angle to the warp.

Sample 4. Badarian 5100 (pl. lix, 4). Linen. Plain weave. Picks 26×22 . Ratio warp-weft 1:1. Colour dark brown. A fragment showing warp and weft at right angles. Yarns all doubled and strongly twisted. The open character of the weave is masked in the photograph by a second layer of the fabric, which could not be removed without risk of total loss.

142. *Sample 5.* Badarian 5101 (pl. lix, 5). Linen. Plain weave. Picks 28×26 . Ratio warp-weft 1:1. Colour dark brown. Yarns all doubled and very tightly twisted. The two small fragments were much decomposed and powdery. Both show considerable displacement of the yarns, the weft being at varying, often acute, angles to the warp.

Sample 6. Badarian 5110. This consisted of small pieces closely matted together by pressure. The mass was very decomposed and powdery, but the structure was fairly well preserved. After treatment, the layers were separated. The pieces were of a similar general character with slight variations in the yarns. Four were photographed.

Pl. lix, 6. Linen. Plain weave. Picks 28×26 . Ratio warp-weft 1:1. Colour dark brown. All yarns doubled, the weft slightly less twisted than the warp. The warp yarns are remarkably parallel to each other, but the weft is at a fairly acute angle. The open character of the weave is pronounced, as in other Badarian cloths.

Pl. lix, 7. Linen. Plain weave. Picks 28×26 . Ratio warp-weft 1:1. Colour dark brown. Similar to 6, but the warp and weft at right angles. All the yarns are rather thicker and more twisted than in that specimen.

Pl. lix, 8. Linen. Plain weave. Picks 28×26 . Ratio warp-weft 1:1. Colour dark brown. Yarns much thicker. Doubled, but with less twist than in other examples of this number. The cloth has a heavier, softer appearance, owing to the more open and springy nature of the doubled yarns used.

Pl. lix, 9. Linen. Plain weave. Picks 26×24 . Ratio warp-weft 1:1. Colour light brown. The best preserved piece. Yarns all doubled and well twisted. The warp and weft rectangular throughout the piece. Weave open as in other Badarian examples.

Sample 7. Predynastic 4620 (pl. lix, 10-12; pl. lx, 1, 2). Linen. Plain weave. Picks 88×50 . Ratio warp-weft 1:1½. Colour brown. Several fragments fairly well preserved, some adhering to

reed matting. No. 10-12 is perhaps the most interesting piece examined. It shows the full width of the cloth, 5.1 ins., and appears to have been the end of a length, the warp yarns extending about .5 in. beyond the woven part.

The central portion of the cloth is fairly regular, all the yarn being single and tightly twisted. In many strands there is an opening out of the twist, giving a false idea of doubled yarn. Towards each edge the warps run much closer together, entirely hiding the weft, which at each edge is returned, forming a selvedge exactly like that produced in a modern calico or plain weave. It is a most fortunate thing that this bit of cloth has survived. It establishes the fact that in Predynastic times the use of a continuous weft and the formation of a selvedge was quite well understood. There is no greater precision in the selvedge made in a present-day power loom than is seen in this very early bit of linen.

Sample 8. Predynastic 3932 (pl. lx, 3). Linen. Plain weave. Picks 52×38 . Ratio warp-weft 1:1. Colour brown. Fairly compact weave. The yarns vary considerably in diameter. All are well twisted and in many of the weft strands there is an appearance of doubled yarns, due to the slacking of the twist.

The fragments of this sample were tightly matted together and deeply stained with a very soluble yellow dye. The flax was very completely retted, and, although in an extremely decomposed state, retains the characteristic jointing marks.

Sample 9. Predynastic 103 (pl. lx, 4). Linen. Plain weave. Picks 54×34 . Ratio warp-weft 1½:2. Colour yellow. Several fragments, closely matted together, were the best preserved of any early Predynastic linen. The flax, though brittle and powdery, still bears all the markings characteristic of this fibre.

It has the general features of the fabrics of Badarian age. The weave is open, there is no beating up of the weft, with the same tendency for these fibres to slip out of the rectangular arrangement produced in the loom.

The yarns are very uneven in diameter and all are strongly twisted. In many places the twist has opened, but there is not the constant and well-developed doubling together of two separate yarns, as in Badarian weaves. In this respect the sample stands half-way between 5100 and 1964. The regularity of the weave is not equal to 5100.

THE MATTING, ETC.

143. The pieces of matting, etc., were all in a very friable and decomposed condition. The stringing together of the bundles is similar to the technique known from sites at El Amrah, Kafr Ammar, Tarkhan, etc. The Badarian examples have exactly the same looping of the fibre string as those of later age. That used in 4620 (Predynastic) is perhaps new. The strand goes *through* each alternate reed, so that no stringing appears on the lower surface. The finest piece of Predynastic cloth, the one with selvedge on both edges, is from this grave. The decoration of the fragment of bone (5110, Badarian) has apparently been produced by punching with a tool having a rhomboidal facet. One edge is fairly sharp, and it may have been used as a scraper.

5101. Badarian (pl. lxi, 1). Reed matting. Small bundles of reed, beaten and softened by steeping, laid diagonally and pressed tightly together. The bundles are tied with thin reed fibre strands. Colour brown.

5101. Badarian (pl. lxi, 2). Reed matting. Bundles not tied together. Twisted strands are pushed through or interlaced between the parallel bundles of reed.

5101. Badarian (pl. lxi, 3). Two fragments of leather mat with remains of reed matting adhering. (a) Thin leather folded over, only slight traces of reed. (b) Reed matting shown below the leather. The string runs *round* two, and under the outer, bundle of reeds.

5101. Badarian (pl. lxi, 4). Goat(?) - skin. Hair black and fawn. Two or three thicknesses, due to folding. No trace of reed matting.

5110. Badarian (pl. lxi, 5). (a), (b) Small bundle, 1 in. long, $\frac{1}{8}$ in. diameter, of split rush fibres. Round it are a number of circlets of thin, narrow rush fibres, some loose and detached from the central bundle. Apparently a fragment of a small basket.

(c), (d), (e). Two fragments of rush matting. The rushes laid in parallel lines in layers, the direction of one layer being approximately at right angles to the other. Several layers thick, compacted by pressure. Colour dark brown to black.

(f) Fragment of bone with incised pattern—a band of small depressed lunettes on both upper and lower surface (pl. lxi, 6).

(g) Small fragment of hide (goat), some fawn-coloured hair adhering.

3844. Predynastic (pl. lxi, 7). A compact mass

of reed fibres formed into loops, the eyes of the loops being on one plane and many of them oval in shape, as though a cord had passed through each loop. There are no ties round the looped bundles. Probably the bundles were originally in one plane; the loops overlap each other. Possibly the edge of a mat, the loops being for attachment to a frame. Colour brown.

3800. Predynastic (pl. lxi, 8). Rush matting, flattened rushes laid parallel to each other in layers, these being arranged so that the rushes cross each other almost at right angles. The whole felted together by pressure. There is no stringing together of the bundles of rush. The lower surface is rough and has small pebbles and sand grains adhering. The top surface is smooth, the vascular bundles in the squashed rush-stems forming fine longitudinal ridges.

4620. Predynastic (pl. lxi, 9). Reed matting, with bits of linen cloth adhering. Sand and gravel entirely covering the lower surface of reeds. These are complete stems, fastened together with fibre string passing through holes pierced in each stem. Colour brown.

4620. Predynastic (pl. lxi, 10). Pieces, about 3 ins. long, of loosely twisted rope, about $\frac{1}{8}$ in. thick. The yarns are of linen, doubled. Colour brown.

Note added in 1928. The early fabrics from Badari were in an extremely decomposed state. The structure of the individual fibres composing the yarn had broken down to such an extent that it was difficult to prepare them sufficiently for microscopic examination. Repeated attempts were made in order to establish their precise nature, but, owing to the almost complete decomposition of the cell-walls, none of these was successful. From the evidence of the longitudinal aspect of the fibre, it appeared to be a coarse type of flax such as was used in many of the later Predynastic fabrics. Quite recently some measure of success has been obtained in a renewed effort to get cross-sections. An examination of these indicates that the yarn used in the fragments of cloth from Badari, such as 1964, 5100, 5101, and 5110, is not made from flax. It is desirable that other fabrics of this period, in a better state of preservation, should be examined before making a more definite statement as regards the vegetable fibre used in these extremely early weaves.

CHAPTER XXI

THE BADARIAN SKULLS

A VERY complete study of sixty crania of the Badarian age has been published by Miss Brenda Stoessiger in *Biometrika XIX*, pp. 110-50. The principal results of archaeological importance may be summed up as follows.

The skulls are smooth, fragile, and feminine in type. The teeth are exceptionally well preserved in aged examples. The general type is like the Upper Egyptian, and agrees to its being the most primitive of that series. It is rather more prognathous than the Naqada skulls, but any resemblance to negro types are so distant as to bar a near connexion, and if there were any relation, it must have been a long way back in evolutionary history. The Badarians are not like the Abyssinians, or the Sardinians who most resemble the Naqada Egyptians. In short, they are not like any Mediterranean or negro type.

The length and narrowness of the skull is like the primitive Indian, and that is the only type at all similar to the Badarian. On setting out the principal measurements of early Egyptian types and of primitive Indian, the Badarian forms a link quite as close to one as to the other. The conclusion is therefore that the Badarians were a fellow-branch with the Indians, both radiating from some Asiatic centre.

These conclusions are most important, as referring to the oldest Egyptian stock. They show that whatever resemblances may be noted in later times to western or southern types are due to invasion, and not really primitive. The way is open now to the possibility of the connexion of early Egyptian mythology with the Caucasus (*Ancient Egypt*, 1923, 46), and it is to Palestine and Syria that we must look for any traces of the earlier history of the Badarians.

F. P.

THE BADARIAN CIVILISATION

PART II

THE PREDYNASTIC SETTLEMENT: NORTH SPUR HEMAMIEH

By GERTRUDE CATON-THOMPSON

CHAPTER I

CONDITIONS OF THE SITE

I. TOPOGRAPHY

The prehistoric settlement which came to be named the North Spur Hemamieh lies on the way between Badari and Qau-el-Kebir, and is situated on a small spur about 2 miles down the Nile Valley from the little village of Hemamieh, distinguished by reason of the fierceness of its dogs, where Predynastic and Old Kingdom cemeteries were worked by the British School, under Mr. Brunton's direction, in the season 1923-4. The 7 to 8 miles separating Badari and Qau lead through a rather dull strip of country, the cultivation coming very nearly to the base of the limestone cliffs bounding the eastern desert, which here run approximately north-west—south-east. A long canal—the El Khez—skirts along their base, leaving room only between it and the cliff-talus for the usual dusty and monotonous canal bank, and a final narrow ribbon of cultivation demarcating the highest level of the inundation area (pl. lxxv, 1). The actual high-water mark is clearly seen in many places, owing to discoloration upon the face of outcrops of naked rock, old denuded roots of the cliffs, projecting into the fields. The base of these is, however, for the most part masked by a succession of spurs of limestone scree, shot out on the plain, and furrowed by innumerable small gullies. The talus slopes lie banked against the cliffs at a sharp angle in their upper part, but flatten out towards the valley level, where they present a gentler gradient of about 8°.

Upon the lower end of one such spur lived a succession of prehistoric peoples, leaving as a record of their existence there some 6½ ft. of accumulated settlement rubbish. In outward aspect there was nothing to differentiate between the appearance of the spurs occupied by early settlements and those formed of cliff detritus only; a uniform spread of limestone chips and boulders covered all alike; and but for indications in the

course of cemetery excavations at Hemamieh village that certain of the talus spurs abutting on to that work contained traces of early occupation sites, it is unlikely that the place in question would have been suspected of possible interest.

Why this shelterless spot should have been favoured by such long-continued popularity surpassed comprehension, when, alternately grilled by the fierce reflected heat from the cliffs or shivering in the unbroken force of north-west winter blasts, I experienced the amenities of the site throughout long weeks of work upon it during parts of two seasons. Pl. lxxv, 2 shows the position of the site beneath the cliffs; and fig. 3 shows it to the extreme right of the picture by the tent; to the left hand is seen a modern fellahin straw shelter, probably not dissimilar in construction to those in use in prehistoric times, traces of which were found during the settlement excavation.

The settlement in its existing dimensions covers an area 40 yards by 50, but there is the probability that originally it extended farther down into the valley, the rising level of the alluvial floor having gradually submerged, or washed away its extension in this direction. Sparse tufts of halfa grass fringe the junction of scree and alluvium, and whilst hacking through the roots of this to find the limit of the settlement, a small inscribed ivory cylinder of Protodynastic age was turned up (pl. lxxxv, 225). Whatever the lower limit of the settlement may have been—and the alluvium appears rather to have truncated than submerged the site—the north and south boundaries were then, as now, confined by small gullies from the cliffs, and the habitation area appears never to have straggled across them, as will be seen in the general plan of the site, pl. lxii.

2. THE AIMS OF THE WORK ON THE HEMAMIEH SETTLEMENT

As a preliminary point of departure for detailed work on the Predynastic periods in Egypt, approached from the point of view of a prehistorian

rather than an Egyptologist, I have felt increasingly the necessity of obtaining data for the correlation of flint types with pottery types on a far more extensive scale than may be expected from cemetery material, where, on an average, not more than about 1 in 20 Predynastic graves contain flint work at all, and these probably restricted in type. We can afford obviously to neglect no evidence which may throw light on early racial movements; and systematic observation of Predynastic flint work, its regional distribution and character in valley and desert, may be expected to furnish us with at least a valuable check upon such deductions as we may feel free to draw from a sequence of pottery types and manufactures. For instance, to take an example, at about S.D. 40 we know that a radically new conception of pottery form and decoration was filtering into Egypt—by what route we do not yet feel certain—and gradually supplanting old indigenous styles. Is this due to culture-drift, racial-drift, or invasion? Just how far does the flint work change too at this period, and if so in what particulars? Is the overlap of changing pottery and flint types more apparent in Upper Egypt or in the North? Evidence of this kind would weigh in our judgement of the respective merits of the Wadi Hammamat or Delta channel of ingress of Asiatic peoples or influences.

As we stand at present very little profitable information in this respect can be obtained from a study of past publications of Predynastic cemeteries; for even in those cases where the flints have been adequately illustrated it is seldom that information concerning their tomb-group can be obtained from the text, unless it happens to be one of those rich and rare examples which are, unfortunately for our purpose, usually selected for detailed description.

My belief was, then, of the desirability of approaching this particular investigation from a settlement-stratigraphy, rather than a cemetery-typology angle. With this in view I endeavoured quite unsuccessfully at Abydos, in 1921-2, to find a settlement site of sufficient importance to make at least a beginning of this study. At Qau in 1923-4 I returned to the quest, and after an abortive attempt to wring reluctant evidence from a Predynastic settlement at Hemamieh village, partially destroyed of old by a dynastic cemetery, and anew by the excavation of that cemetery, I gave up the site as useless for my purpose, and moved another two miles up valley to the North Spur site.

But this year a second motive came unexpectedly to share equal place with my original intention. The new, undated class of combed pottery had been found at Qau, in then uncertain context, by Mr. Brunton in 1922-3, and his further discovery in 1923-4 of the cemeteries of its makers—later to be called the Badarians—hinted at the possibility that fortune might favour me with a situation upon which to test my convictions for the necessity in Egyptian prehistory of methods amplifying the information likely to be obtained from cemetery excavation only. For one of the most remarkable facts about these combed-ware graves was their homogeneity. In a district abounding in Predynastic graves of all periods, no ordinary Predynastic grave was ever found to contain combed ware, nor was typical Predynastic pottery present in "Badarian" graves.

That more than one Predynastic period would be represented on such a restricted and unprepossessing site as the North Spur Hemamieh seemed improbable. A short test, however, showed the potential value of the place, and the first day's full excavation proved that this was what I sought: for the first dozen or so serial numbers of objects recorded from it included decorated, black-topped, white-cross-lined, and combed-ware sherds, as well as flints and other objects, lying in what was in the trial spot absolutely undisturbed ground.

3. THE METHODS USED

Work was begun on the settlement on the 8th of February 1924, after a preliminary test of the deposits. Before methodical excavation began the site was fixed by plane table, levelled and contoured (zero datum being a point at the edge of cultivation), and bases were established at four corners and at four intermediate points. The area pegged off for the first investigation lay near the base of the south-east corner. This area, 60 × 35 ft. (Area A1—A6, see pl. lxii) was then subdivided into strips 10 ft. wide, which gave convenient elbow-room for three men working abreast with their basket-boys, as many as it seemed wise to employ that first season in view of the very detailed nature of the work proposed and the incessant personal vigilance required. The strips, 35 ft. long and 10 ft. wide, were next pegged off along their length at 5-ft. intervals, and then cleared horizontally, about 6 ins. of clearance being effected over the entire surface, unless specific circumstances dictated other-

wise, by a gentle combing motion of the three *turyiehs*, before the next 6 ins. vertical was begun; and so on until bottom was reached. The perpendicular section of the next strip was thus exposed to view, as well as two right-angle sections: notes and measurements of the lie of the bedding, where any existed, or any abnormality were made before the next strip was measured, pegged out, and excavated. Over this work I stood and watched continuously. Each man threw out the rough sherds, too abundant to be more than collectively dealt with, into a basket, the contents of these when full being emptied into heaps marked with their respective level. From these, a selection of typical rims from each level was finally kept only. The vast majority of sherds at all levels were of coarse brown-red ware, containing much straw, a characteristic of Predynastic rough wares. Professor Peet estimated that at the Abydos Predynastic settlement 99 per cent. of the sherds were of this character. I can support this estimate. On the other hand, special sherds of any distinctive ware, flints and other objects of interest, were marked with a serial number, the position was recorded in plan on squared paper to within 1 square foot, and the depth noted.

Although this 6-in. layer method was the standard adopted and normally enforced for the whole site, necessary deviations from a too rigid application of this principle were not infrequent, as will be readily understood by all those acquainted with the working of similar sites in any country. Further subdivisions sometimes became inevitable from various causes—a particular pocket to be worked out both horizontally and vertically, or the tilt of a line of hearth, such as is seen in pl. lxxv, 4; whilst certain areas on the north-west side, worked the following season, were broken into by hut circles or Old Kingdom graves, necessitating a readjustment of method whenever they emerged. For reasons such as these the serial numbers of the objects given in the analysis to follow (Chapter VII) will not always be found to run consecutively throughout one level; the break indicates that for some reason, usually obvious on consulting the plans, a local transgression has taken place into another horizon, or, as occasionally happened, an interesting or difficult spot left over for dissection at a more favourable or leisured moment. Plan numbers must therefore be considered as symbols of position only, and they bear no other function. A certain number of objects will be found to have no serial

number, but are identified by their area, and level in that area, only. These comprise the pieces whose exact position in plan was doubtful or unknown, but whose area and stratum are certain. They have been eliminated from the type collection at University College, and form the minor collections in the possession of the Ashmolean and Manchester Museums.

It may be well to put on record that during the course of the work throughout two seasons I was continuously on the site, directing, recording, and working; at no moment was the work in unsupervised native hands; in no single instance was the position of an object taken on trust. I conceive this to be the only possible method to deal with this class of work, however reliable, however skilled, the native labour. The only day in the two seasons when work was done on the site in my absence was once at the end; I could not be there; a corner was unfinished; to leave it meant destruction the moment we decamped; there was the thousand-to-one chance it contained something of intrinsic importance, apart from its position. The workmen were sent to finish it off by themselves; nothing of interest was discovered and neither sherd nor other object brought back was entered.

The workmen, increased in number to four *turyiehs* the second season, learnt to work in this unfamiliar, and to them despicably slow, manner, with great accuracy of level; and although, as I have said, they were never left to carry on by themselves, they quickly acquired a methodical routine, which the prospect of *bakhshish* on all good finds (and even sherds of the more valuable potteries ranked as such) prevented from developing into apathy. Comparatively little sieving was attempted, its use being reserved for patches of definite "hearths" and hut circle contents, in the special hope of collecting grains and seeds. The delay in the progress of the work, already intrinsically slow, had screening been normally employed, seemed to me on this occasion to outweigh its merits. I was single-handed throughout the work, and was too preoccupied with the digging, constant levelling, and recording, to be able to divert my attention to an effective supervision of sieving operations.

The possible oversight of the diggers gave their basket-boys an occasional opportunity of getting their masters' *bakhshish*—an opportunity, when explained to them, not lightly to be missed. The rubbish was therefore carefully searched by eager

eyes and fingers as it was tipped from their baskets on to the dump. No basket-boy got rich, not more than 10 per cent. being recovered in this way.

The chief technical difficulty presented on this site was the slope of the ground. As a general principle of excavation technique I believe that working sections following the dip of the ground are preferable to sections across the slope. But in practice it became immediately apparent that this ideal would be impracticable, since the strong prevalent north-west wind rendered it imperative, on account of the clouds of fine, choking, black midden dust, for the men to work at right angles to the slope. The checks on the relative levels of the men working on horizontal platforms had, consequently, to be more frequent and more rigid than would have been necessary had the other method been possible. It was in order to provide a correction to the stratigraphical difficulties of working on cross-slope, or strike, sections, that from the onset I adopted the precaution of laying out Area A in the manner shown in plan, so that both a strike and dip face (to appropriate geological terms) of the midden should be visible simultaneously throughout the work, and the relation of the deposits to the sloping floor clearly followed.

4. THE NATURE OF THE DEPOSITS AND GEOLOGICAL STRATIFICATION

Of geological stratification the site offered but two clearly defined examples, both of considerable value, forming, as they did, a sandwich of the midden earth. One was an overlying wash of clean white limestone scree, well seen in pl. lxvi, 2, and pl. lxviii, 3, in contrast to the dark midden material underlying it. This wash was of variable thickness, but in no place did it exceed 11 ins.; it indicates interestingly the even balance between deposition and denudation, deposition having won the race by 11 ins. since late Old Kingdom times. This evidence is, however, clearly of local value only. The other occurrence of a definite geological stratum was the breccia deposit underlying the settlement proper, and which proved to be of great archaeological importance. I use the word "breccia" in this connexion with a full realization of its accepted geological meaning. It was an angular limestone scree, bound together by redeposited carbonate of lime (the legacy, one would surmise, of a period of higher rainfall) into a consistency of such intense hardness that its excavation, even in

small patches, became an undertaking as arduous to the men as it was destructive to the pick-axes employed to deal with it. Indeed, its hardness had effectually deterred the Old Kingdom grave diggers from all attempt to carry their grave shafts to a normal depth. Fortunately the thickness of this deposit barely exceeded 10-12 ins. Its floor was rather irregular. On pl. lxv, 5, the men are seen at work upon this stratum, where it underlies some 6 ft. of midden deposit. The gap in the section face is due to the removal of burial no. 214. On pl. lxv, 4, the breccia is seen in section, at a spot in Area G, where it lies some 3-4 ft. only beneath the surface—the settlement accumulation thinning out towards its north-east borders—and where it is immediately overlain by a line of dipping hearth of Early Predynastic times.

Throughout the earlier part of the first season both I and the workmen were deceived into thinking this hard floor represented the settlement bottom. We cut through it in one or two places, for precaution's sake; our belief was, however, confirmed by a complete absence of archaeological material beneath it. It rested upon an unconsolidated layer of limestone rubble and dust, as devoid of ash or extraneous dirt as the day it was washed there from the cliff slopes above. We left it at that, satisfied. Nevertheless, the occurrence of this breccia interested me, because I had already noted in various places in the Nile Valley others of geologically recent formation—some apparently as recent as the Early Dynastic age; and their potential value as climatic barometers within the span of human history had for some time been in my mind. It was during the second season that I again had some more of this deposit removed, to ascertain the variability or constancy of its thickness, and I was astounded when a Badarian combed sherd (plan 228g, pl. lxxvi, 287) was handed up to me from the dusty ground beneath. An examination of the ground in which it lay showed that at this point it contained just enough impurity for the workmen to proclaim *sebakh*. From that moment a thorough examination of this interesting stratum was pursued, and though it involved much unprofitable work, we succeeded in collecting thirty-six Badarian sherds, one, no. 257a (pl. lxxvi, 277), being nearly half of a complete bowl; as well as three sherds of uncombed polished red ware; in addition, three worked flints were recovered (pl. lxxxv, 206, 208, 209). This discovery of Badarian sherds in

situ in a position outside the reach of any possibility of disturbance placed in my mind a final seal upon the evidence for their cultural horizon, evidence which had, indeed, been slowly collecting throughout two seasons, with unanswerable consistency, from the settlement proper overlying the breccia deposit. It was impossible to doubt that we were dealing with a people, using a distinctive pottery technique, who on this site at any rate were the first arrivals, and who here antedated the usage of ordinary black-topped and white-cross-lined wares which had hitherto held priority of position in Predynastic Egypt.

What is the relation in point of time between the Badarian sherds *under* the breccia layer and those in the lowest levels of the settlement *above* it? Geologically the point is not easy of determination, and the time allowance necessary for the formation of a 10-in. layer of breccia must be purely a matter of individual geological judgement. Personally I am prepared to believe it might have been formed in a few seasons. The formation on limestone desert surfaces, of hard floors cemented by a calcareous matrix, due to redeposited carbonate of lime, and the rapidity of evaporation, has been carefully described by Dr. W. F. Hume in *Geology of Egypt*, Vol. I. Given the required combination of circumstances, it does not appear to be a process which requires length of time. This view of the matter accords with the archaeological witness. The Badarian sherds from below the breccia are, to my mind, too closely the counterpart of those from above it to permit of a long break in time between the two. It is quite clear that the site in its pre-breccia days was not used by the Badarians as a settlement. The rarity of their sherds and flints and the cleanness of the ground point to no more than a passing presence. Perhaps their settlement proper was lower down, in the now alluvial plain.

CHAPTER II

THE ARCHAEOLOGICAL STRATIFICATION

5. GENERAL ACCOUNT

The 5 or 6 ft. of midden material lying between these two instances of geological stratification was a more or less homogeneous mass of grey-coloured deposit, streaked by darker horizontal or tilted seams of ash, charcoal, and dung fuel, and in places

containing interbedded patches of limestone scree from the cliffs, doubtless the wash of prehistoric rain-storms. This combination is shown in pl. lxxv, 4, and pl. lxxvii, 4. The spur in all its parts, except near the slope down to the bounding gullies, appeared to have been continuously occupied since the formation of the breccia in Badarian times, up till the Late Middle Predynastic period with its decorated pottery and characteristic flint end-scrapers which occurred plentifully in the top layers of deposit. The deposits are the cumulative residue of this continuous occupation; this fact cannot be too positively asserted, in order to remove any possible doubt as to the manner of their accumulation. An alternative possibility has been suggested without knowledge of the site or reference to the evidence; it is that the deposits represent a down-wash from a settlement at a higher level on the talus slope; if this were so, the value of the archaeological stratigraphy would, admittedly, be *nil*. Acquaintance with the aspect of the site is sufficient to disprove any such possibility; ascending the talus above the upper limits of the settlement the slope increases rapidly, and stark ribs of rock protrude through the scree. This will be seen in the photographs, pl. lxxv, 2 and 3. Settled occupation at a higher level than that chosen is out of the question, the steepness and ruggedness of the slope preclude it. Moreover, the nature of the deposits themselves and their definite "hearths" admit of no other interpretation than that these deposits are *in situ*. But in this connexion I would wish to emphasize that no claim for an exaggerated accuracy is advanced; the very nature of a settlement gives the lie to any such claim. All that can be maintained is that care was taken that the information, *as left by its prehistoric population*, should be recorded as accurately as lay in my power, and that such information should, judged as a whole, give information just as reliable as that wrested by the same means from European Stone- and Bronze-Age sites. Humanity does not live under strictly stratigraphical rules, and units of archaeological evidence will, inevitably, be out of place, however undisturbed subsequently a site may be.

But judged on the broad lines of the averages of different levels, we may gain a general impression, representing on the whole, I venture to think, an accurate picture of the archaeological sequence of events. At the same time it is well to keep in mind that the evidence of one site is insufficient for

conclusions of far-reaching importance outside its own area. More settlements must be worked. In Early Predynastic times we cannot expect to find a sequence applicable to widely removed areas in the Nile Valley; wandering tribes in a semi-nomadic state of organization, from the eastern and the western deserts, probably came and passed on at frequent intervals, just as we see them doing in the dynastic Pan-grave intrusions; and there is at least a measure of probability that, for instance, a tribe, or group of allied tribes, using a distinctive method in their pottery manufacture, may appear as the founders of a settlement in one spot, and as the second or later comers in another.

6. THE LOWEST LEVELS. BADARIAN STRATA. PRE-BRECCIA TO 3 FT. 6 INS.¹

As far as our evidence on the site goes, however, the Badarian civilization has unquestionable priority; its people, with a settlement in the great bay at Qau—from which earlier in the season I recovered sundry flints and combed pottery, but which was too shallow to yield the desired chronological data—and with another settlement some miles north at Badari, skirted along beneath the Hemamieh cliffs from one to the other, leaving by their broken crockery just such a record of passage as modern man leaves with his broken glass litter. In course of time the loose limestone scree, over which they passed, consolidated, though I would surmise by observations on the Fayum middens, where infiltration through an organic layer appeared to act as a consolidating agent upon the underlying sands, that a state of *complete* brecciation took place very gradually and probably *after* the subsequent permanent occupation of the site. Be that as it may, Badarians eventually returned, and made of the spur a temporary camping-ground. Except for 106 of their beautiful sherds, and a few worked flints, nothing of this earliest post-breccia period was found—neither habitation, nor the various objects of their daily life and art so well represented in their cemetery at Badari. The ground was relatively clean, white, and dusty, as seen at the bottom of the section pl. lxxv, 5, just above the breccia stratum upon which the men are at work.

The general level of the site gradually rose by accumulation 2 ft., and still we find the combed ware present, 73 sherds belonging to this later

phase of Badarian occupation (4–5 ft. level); a diminution to 40 combed sherds occurs in the succeeding 6 ins. above (3 ft. 6 ins. to 4 ft. level). At this point the disappearance of combed ware is startlingly sudden, only six more fragments being found at a higher level. The 2 ft. 6 ins. immediately overlying the breccia may therefore be called the true Badarian period of occupation. The evidence is epitomized in the pottery table in section 9, which should be consulted throughout this discussion.

The Badarian culture is succeeded by an influx of ordinary black-topped and red-polished wares. These are indeed represented sporadically throughout; but whereas the combed ware shows a steady increase towards the lower levels, the black-topped pottery, starting from its maximum frequency in the middle levels of the settlement, diminishes as the base is approached.

On the evidence of one settlement alone the conclusions to be drawn from this fact must needs be tentative; the evidence given by the Badarian cemeteries, the graves of which included only four doubtful instances of ordinary Predynastic wares, introduces into the question a factor of the very greatest importance, and, to some extent, of complication. The interpretation which, on the present facts, I believe to be warranted, would place the Badarian civilization as an earlier phase of the Amratian (black-topped—white-cross-lined period), which was its lineal but ceramically decadent descendant. The close typological relationship between the two is evident; not only do we, on the one hand, find in the Badarian combed pottery a prototype for the *forms* of the black-topped ware, but also identical methods of *firing*. An equally strong typological relationship may be made out between the Badarian and the white-cross-lined and red-polished potteries, resting upon the partiality shown in both for keeled forms, as well as in the resemblance between some of the impressed patterns found upon the interior of certain Badarian bowls, and the white-painted designs upon the white-cross-lined pots. I refer here not so much to the geometrical as to the branch or leaf motifs common to both. A further point to bear in mind, but with a plea for restraint imposed by our limited data, is the synchronous appearance in Middle Neolithic deposits in Crete of peculiar “rippled” pottery and incised plant motifs. A carination is extremely rare in the black-topped pottery series, and such as

¹ The strata are discussed in order from the lowest upwards. Levels, however, refer to depth beneath surface.

there are belong to the earliest period. In the white-cross-lined wares, restricted according to Professor Petrie's observations to a sequence date in the early "thirties," on the contrary, it is a favourite form. The early Predynastic black-topped and white-cross-lined wares, so distinct from each other as to make, theoretically, a common origin improbable, appear to have found in the Badarian their common root. Racially and radically they are one. The marvellous fineness of the best Badarian pottery, the artistic sensitiveness shown in its decorative combing frequently applied to the inside as well as the exterior of the vase, and the impressed interior designs (pl. lxxiv, 231, 237; pl. lxxv, 239, 250, 251; pl. lxxvi, 290), gradually gave place to the inferior "mass production" of the Amratian age. The lower levels of the settlement appear to me to reflect that transition. The cemetery with its purer Badarian culture may belong to an earlier phase, before degeneration set in.

The Badarian Flint Work

An examination of the worked flints from the various pottery levels provides interesting supplementary evidence. The first broad generalization which can be made is this: that whereas the top levels, beginning with the decorated pottery and descending to the 3-ft. level, produce a very fine flake industry, with beautifully fashioned end-scrapers on long blades, ovate and circular scrapers, and a variety of knives (pls. lxxviii-lxxxii), the lower levels with the combed ware produce predominantly a core industry (pls. lxxxiii-lxxxv).

An overlap of types begins to be apparent in the 3-4-ft. level, just as we find it in the pottery. In the flint working, however, we have to reverse the order of degradation; the general technique improves greatly in the higher levels, and shows a far more careful choice of raw material. Whilst the Badarians were frequently contented to select indiscriminately a rough nodule, whose crackled orange cortex reveals long exposure on the desert surface, the later Predynastic folk were wont to select their material, carefully, from the fine pinky-grey chert obtained in tabular, calcareous-coated bands *in situ* in the Eocene cliffs. I am tempted to see in this preference by the Badarians for a raw material of rough derivative nodules of which to fashion their tools and weapons, whilst far finer material lay *in situ* at their very door, a perpetuation of enforced habits acquired in their ancestral home

outside the Nile Valley. May I suggest for consideration that flint *in situ* was unfamiliar to them—that their acquaintance lay with derived material? and may I go still further and suggest that their original home may be looked for in an area outside the chert-bearing limestone regions?

Now, in the eastern desert these limestones cease south of latitude 25° where we pass from Eocene to Cretaceous rocks. In the western desert the boundary is farther south. On the other hand, the tertiary limestones extend unbroken from this point north, right away to the Mediterranean, and may be followed on north-eastwards into Palestine.

The best class of Badarian flint work revealed in their cemetery is scarcely represented in the settlement; not one example of their characteristic sickle-flints of well-known Fayum type, pressure-flaked over both faces, and with coarsely denticulated edges, was found. The only types of better flint work which can be claimed in common with the grave goods are the concave base arrow-heads (pl. lxxxiii, 157, 166A, 167), and the delicate leaf-shape arrow-head, 168). Mr. Brunton has discussed in chap. viii, pt. 1, the evidence relating to the respective ages in Egypt of the different forms of arrow-heads, and with his conclusions I am in complete agreement. His attempt to subdivide chronologically the concave-base form in accordance with its wing-angle is interesting: if for the moment I here find it difficult to follow him with confidence, it is on account of the Fayum midden evidence, where varieties of wing-angle and outline are found to be contemporary. It is a matter of considerable typological interest to the prehistorian to find that the sequence of arrow-head development in North Africa (as far as our evidence at present goes) follows the same lines as that of Northern Europe, where both the lozenge and leaf-shaped arrow-head and the concave-base form precede the tanged and barbed varieties.

But unquestionably the most typical and striking Badarian tool is a heavy, nodular, push-plane or steep-ended scraper. For the manufacture of these a massive flat-bottomed nodule of roughly plano-convex section was selected, the flat base affording a natural striking platform for the removal of several more or less parallel, long flakes at one (or in rare cases both) ends. Beyond this simple and effective end trimming little more was attempted in the way of further retouch, the domed cortex of the upper face producing unaided a satisfactory hand-grip for planing work (pl. lxxxii, 142-143; pl. lxxxiii, 161;

pl. lxxxiv, 183-184, 188; pl. lxxxv, 206-207). Specimens of these implements were found also in Badarian graves, and numerous examples were collected from adjacent spurs (compare pl. xxix, 1). The chert of which this class is normally made has a rough, orange or brown crust, denoting long exposure to surface weathering prior to its conversion into implements. The type appears to be quite as distinctive of the Badarian as the combed pottery, since we meet nothing like it, as far as I can trace, in later Predynastic times. The implement is certainly not an agricultural tool such as a hoe, nor is it a weapon. The most reasonable explanation of its function would be in leather tanning.

Another interesting form which, though made on flakes, appears also to be Badarian, is shown in a series of small knives of good workmanship (pl. lxxxii, 129-135, and photographed also for pl. lxxiii, 189-195 inclusive). They are made in a dark-grey, almost black chert, whose source does not appear to be local. The upper face shows longitudinal flake-scars and low single or double flake-ridges, whilst the under face is a plain flake surface, from which in nearly all cases the percussion bulb has been trimmed away by terminal retouch, leaving, however, ripple marks showing the direction of the blow. Secondary work of delicate quality is confined to either the curved tip and butt, as pl. lxxxii, 131, 135; or the tip, butt, and intermittent batter of the back edge, as pl. lxxxii, 130; or tip, butt, and entire length of back margin, as pl. lxxxii, 129, 132, 134. The result of this last method suggests a kind of pseudo-Châtelperron point.

I am aware that the distribution of these little blades in the settlement is not completely consistent with my claim for them of a Badarian age. Their levels are:

- 1 at 1 ft. 6 ins. (pl. lxxix, 40)
- 1 at 2 ft. 6 ins. (pl. lxxx, 66)
- 2 at 3 ft. 0 ins. (pl. lxxx, 93, 94)
- 1 at 3 ft. 6 ins. (pl. lxxx, 115)
- 7 at 4 ft. 0 ins. (pl. lxxxii, 129-35)
- 1 at 4 ft. 6 ins. (pl. lxxxiii, 158)

Of those at 4 ft. four lay upon, or very nearly upon, the breccia, which at this point was irregular. My belief in their Badarian origin (whatever their occurrence in higher levels may denote) is, however, based upon the discovery of an identical specimen

lying underneath a Badarian combed-ware pot in the shallow settlement, entirely of that age, in Qau Bay.

Pressure retouch, known to have been in vogue at this period and employed upon the sickle-flints, knives, and arrow-heads found in the graves, is clearly a refinement reserved for the finer tools; the settlement produced one example only—a scrap of broken blade seen on pl. lxxxiii, 171.

Absence of Other Badarian Objects in the Settlement

No trace of copper or metalliferous ore was found in the lower levels, and were it not for the two examples from graves, the Badarian civilization, on the settlement evidence alone, might erroneously have been ascribed to a completely Neolithic status.

Neither was there any more certain clue to their agricultural activities than may be deduced from a hand-mill stone (plan 19). No sickle-flints were found; since samples, however, were obtained from the graves, we are again confronted with the worthlessness of negative evidence.

7. THE INTERMEDIATE LEVELS. EARLY PREDYNASTIC STRATA. 3 FT. 6 INS. TO 3 FT.

Passing up out of the Badarian levels, we come at 3 ft. to 3 ft. 6 ins. upon more certain traces of settled occupation, as shown by the remains of nine hut circles, in use after the combed ware had had its day, and before the advent of the decorated pottery. This early intermediate stratum is characterized by the comparative abundance of black-topped and red-polished pottery, and by the occurrence in it of a rough-faced brown or grey ware, incised with a herringbone decoration (pl. lxxiii, 147, 148, and at a slightly higher level, pl. lxxii, 121). Fragments of this last were actually found on the floor of a hut circle, and though this class of ware has not previously been recorded or sequence dated, it is here proved to be earlier than the decorated pottery, and it must be placed, along with the huts, at round about S.D. 40. Two fragments of white-cross-lined ware occur in this level, but it is not possible to sequence date them by their decoration.

The flints associated with this black-topped pottery are interesting: circular or oval scrapers made on a flake are now in use (pl. lxxx, 107-112), usurping the position occupied by the nodular steep-ended scraper of the underlying levels, but no example yet occurs of the end-scraper on a long blade, so well seen in the upper levels with the decorated

pottery. The material of which these flints is made is of locally-obtained tabular flint, possessing a white calcareous crust in the cases where this (as in nos. 108, 114, 118) has not been completely removed in manufacture. A good example of a typical Predynastic sickle-flint is seen pl. lxxx, 116: it belongs to the square-ended variety, found in about equal numbers with the single-pointed type. The contrast between these sickle-flints and those used by the Badarians is very striking. Instead of an implement pressure-flaked over both faces, of thin oval section, we have in this later form a type edge-trimmed only, with triangular or angular section. The upper face shows anticlinal longitudinal flake-scars, and one or more flake-ridges, whilst the under-face is a plain bulbar surface from which the bulb of percussion has been removed by the end trimming. One lateral margin only is denticulated; I know of no instance where both are notched. This point again marks a distinction from the Badarian and Fayum sickle-blades, where a small proportion show a double saw-edge. In the ordinary Predynastic type a considerable amount of battering is found on the non-denticulated edge. This is probably a precaution against an over-sharp unworked edge of natural fracture cutting too deeply into its wooden sickle-socket, and splitting the wood (note specimens, pl. lxxviii, 22, 23, 26; pl. lxxix, 42, etc.). The feature is not, however, invariable (pl. lxxviii, 25; pl. lxxx, 116).

THE UPPER EARLY PRE-DYNASTIC AND LOWER MIDDLE PRE-DYNASTIC LEVELS. 3 FT. TO 2 FT.

Here at last we have finally cleared all outliers of Badarian combed ware: black-topped and red-polished sherds have dwindled, and the layer has assumed a mixed character, for whilst scarce decorated and wavy-handled jars appear, two more pieces of white-cross-lined were found. The flint work, too, contains a mixture of types, but is now becoming Middle Predynastic in character: two end scrapers on long thin blades (pl. lxxx, 87, 90) are noticeable for the first time, and there is a continuous abundance of scrapers on flakes of various kinds, including the fine circular forms, pl. lxxx, 60, 61, 69, 73. An interesting piece is seen pl. lxxx, 89, where we have a broken fragment of a ground and ripple-flaked knife, which has been providently refashioned as an oval scraper, by marginal retouch. Pl. lxxx, 98, is an awl, the shaft showing beautiful fluting. No. 99, with a carefully

worked tang, recalls our European "Font-Robert" type; it is doubtless an arrow-head. No. 96 is a small pointed ovate chipped celt; another, more triangular, specimen came from the 2 ft. 6 ins. level. The little Badarian knives, nos. 93, 94, seem to be definitely out of place, unless, as is very possible, they were found by our later Predynastic people and pressed into service; they are in the same dark grey chert as the series at 4 ft. already alluded to.

A very fine fish-tail knife, pl. lxxx, 72, is definitely Middle Predynastic. It shows workmanship equal to the best class of grave goods, and we must therefore consider these fine forms as articles of some specialized everyday utility—valued, it would seem, since the other specimen on pl. lxxix, 57, has been broken and re-used until little of the shaft remains.

Bone Tools. There are several bone tools belonging to this period (pl. lxxii, 124-131), perhaps the most interesting being short lengths of hollow bone, such as no. 131, cleanly sawn through at both ends. Such bone tubes are known to have been used as paint containers in prehistoric Europe, and it is conceivable the same use was here intended. A short-toothed ivory comb (pl. lxxii, 130) appears to be Middle Predynastic, its known range in time being S.D. 40-70.

Spindle Whorls (pl. lxxii, 137-141, etc.). Several of these were found: they are of the usual hemispherical form, with one or two barrel shapes as well: they are all in white limestone.

Copper. Two pins belong to this period, and are illustrated (pl. lxxii, 100, 123).

Grain. Besides a few grains of Emmer wheat found in hut circle 249, a small patch of this cereal, in an uncarbonized condition and retaining its husks, was discovered in Area A6 at 3 ft. The hut-circle specimens are, to my mind, securely dated to a period round about S.D. 40 (for evidence consult Chapter IV), and it was interesting to find that Mr. Brunton's discovery of Emmer at Hemamieh Cemetery, which was then unknown to me, occurred in associations which he ascribes to "round about S.D. 40."

Fauna. The animals identified include sheep or goat, pig and ox.

8. THE UPPER LEVELS. DECORATED POTTERY. 2 FT. TO SURFACE

From now onwards up to the surface we are definitely in the Middle Predynastic period of the decorated pottery, 59 of the total number of 67 sherds of this class of ware found in the settlement

being present in these upper levels. The designs show the familiar types, fragments of the well-known boat pictures being included (pl. lxx, 15 ; pl. lxxi, 70) as well as animals (pl. lxx, 5 ; pl. lxxi, 74) and birds (pl. lxx, 20 ; pl. lxxi, 53, 69). An interesting fragment is pl. lxx, 6, showing a pair of human figures, always a rare and probably late motif on painted vases. Other designs are described in the Inventory, Chapter VII, and need not be elaborated here.

The flints include several long knives of various forms. The long, straight, shouldered knife irregularly flaked over both faces, with thin oval section, seen both in pl. lxxix, 53, and photographed pl. lxxi, 84, has a variant in pl. lxxix, 35, which is made on a twisted and curved flake with triangular section. This type is well known in the Middle Predynastic period, though it is usually unshouldered, and is rarely flaked all over the under-face as in our specimen : nos. 36 and 37 are the more normal type, another specimen of which (pl. lxxi, 85) was found, together with a series of rougher flints, in a pot. Unfortunately this type of pot has a long sequence date run within the Middle Predynastic and does not serve to date closely its contents.

Of other flint types the upper levels produced a quantity of sickle-flints of the ordinary Predynastic type. These are made on pointed or squared flakes (pl. lxxviii, 22-26, etc.), and nearly all have an unmistakable friction polish upon the serrated edge. In some cases the saw edge is considerably blunted by wear (pl. lxxviii, 26). In others the denticulation is deep and squarely cut (pl. lxxviii, 23, 24, 25).

Single end scrapers on long flakes with beautiful terminal retouch are common in this period (pl. lxxviii, 1-3, 5 ; pl. lxxix, 30, 31) ; they all have plain flake under-surfaces, a feature shared in common with the ovate and circular scrapers. Pl. lxxviii, 4, is a double-ended scraper formed on a concave flake. Pl. lxxix, 56, is a little knife with curved tip, of miraculous thinness, and very delicate marginal retouch. I doubt whether the concave base arrow-head, pl. lxxix, 41, is in place ; the small tanged form is that usually associated with the Middle-Late Predynastic and Protodynastic periods. Pl. lxxix, 38, suggests a Protodynastic form, comparable to the 1st dyn. types at Abydos.

9. ABANDONMENT OF THE SETTLEMENT IN LATE MIDDLE PREDYNASTIC TIMES

There are too few objects of definitely Protodynastic associations to warrant the assumption that

the settlement continued in use up till s.d. 79. The small black-polished vase, plan 34 (pl. lxx, 22), may conceivably be later than the *corpus* type to which I have compared it, s.d. 58-64. There is also the ivory cylinder (pl. lxxxv, 225) obtained from amongst the halfa-grass fringe of the settlement, and one or two rims, but that is all ; and these may have been introduced at the time of the Protodynastic burials, which are dealt with in Chapter V. The site went out of use along with the decorated pottery, and from now onwards, till Old Kingdom times, it served only as a place of occasional burial.

A summary of the ceramic evidence follows. In connexion with this it is necessary to point out that I have found myself unable to devise any system of concise tabulation which covers every aspect of the evidence. The difficulty of course lies in the fact that a settlement deposit is not of uniform thickness, and that generalized treatment of the entire settlement, such as is here attempted, forces a small proportion of material out of its true perspective. For instance, at certain spots 4 ft. was the maximum thickness, and material lying upon breccia at this level is, presumably, contemporary with the 5 and 6 ft. levels in other places. The table, however, subject to this reservation, which affects a very small proportion of material, and which in any case *decreases* rather than *increases* the impression received of the high proportion of Badarian pottery at the lowest level, has the advantage of summarizing the position, and showing at a glance the overlaps which occur in different levels. As a corrective, the detailed inventory of each of the 15 limited areas into which the settlement was subdivided is given in Chapter VII, and in it the lowest local level is shown in heavy type. My division of the levels into Badarian ; Transition ; Early Predynastic passing into Lower Middle Predynastic ; and Full Middle Predynastic, involves a small margin of doubt as to where the division should come. In a sense each level is, to some extent, a transition, as indeed it is bound to be except in those cases where marked discontinuity of occupation, or geological agency, sharply separates one period from another. Taking, however, *all* the evidence into account, these divisions seem to be warranted.

It has been my endeavour to provide the data necessary for the reconstitution of the site, if such should ever be required.

COMPARATIVE POTTERY TABLE OF LEVELLED SHERDS¹

Level. ²	Decorated.	Wavy Handled.	Black- topped and Red- polished.	White- cross-lined.	Badarian.
TOP					
Middle Predynastic Occupation { Surface to 1' 0" . 1' 0" to 1' 6" . 1' 6" to 2' 0" .	43 4 12 } = 16	— — 3 } = 3	2 1 2 } = 3	— — — } = 0	— — — } = 0
Early Predynastic Occupation, { 2' 0" to 2' 6" . passing up into Lower Middle 2' 6" to 3' 0" . Predynastic 3' 0" to 3' 6" .	3 4 — } = 7	1 4 — } = 5	10 9 32 } = 19	— 2 2 } = 2	— 1 5 } = 1
Transition or Disturbance { 3' 6" to 4' 0" . 4' 0" to 4' 6" .	1 — } = 1	— —	10 8 } = 42	— 1 } = 2	40 27 } = 45
Badarian Occupation { 4' 6" to 5' 0" . 5' 0" to 5' 6" . 5' 6" to 6' 0" . or breccia level. Beneath breccia .	— — — —	— — — —	6 7 8 } = 15	— — —	46 61 45 } = 106
BOTTOM			3	—	36

¹ Immense quantities of rough village sherds were got from the settlement; the finer wares here shown are relatively scarce.

² Levels are here shown, as worked, in 6-in. layers. This scale is unnecessarily fine to show broad results, for which consult bracketed figures of 1-ft. levels. At the same time the necessity to work in the field to at least a 6-in. margin is emphasized by the fact that the true archaeological stratigraphic upper limit of the Badarian culture would have been missed by a 1-ft. gradation of level.

CHAPTER III

SETTLEMENTS AND THEIR VALUE

10. THE VALUE OF SETTLEMENT SITES AS COMPLEMENTARY TO CEMETERIES

Sites similar to ours must still exist in Egypt in quantities, as much unsuspected by the archaeologist as by the *sebak* diggers, who have doubtless destroyed very large numbers. They suggest a field of research rich in promise of prehistoric data when their value as the complement of cemetery excavation comes to be more generally recognized by Egyptologists, intent only too often in the past upon the richer material harvest afforded by the graves. The truth of the dictum "what the excavator finds is not more important than the conditions in which he finds it" (J. P. DROOP, *Archaeological Excavations*) still requires constant reiteration.

The prehistoric sequence in Egypt, so brilliantly

but somewhat precariously established on tomb-group typological evidence, should not cause us to forget that for sure relative dating of the earliest periods grave contents by themselves are insufficient, and require such corroboration and amplification as the prehistorian, working on lines elaborated in years of European prehistoric field-technique, looks to find in an archaeologically, if not a geologically, stratified site.

The mistrust felt by some archaeologists towards a chronological sequence based exclusively upon purely typological data was expressed by the late M. NAVILLE in *Cemeteries of Abydos*, Part I. The validity of such criticism, in a generalized sense, is unquestionable: the fact that the criticism in particular was specifically directed against the Nile Valley Predynastic sequences, which, though originally a purely typological deduction, have nevertheless proved correct throughout in broad outline, does not abrogate the dangers inherent in

the method. I am far from wishing to underestimate the chronological importance of a "closed find"; but its relative limits are narrow. For this reason I would urge that whenever an early cemetery is found, the habitation area furnishing that cemetery should be sought as well. Graves give us as their special, quite invaluable contribution the physical aspect of a people, the spiritual aspect, as seen both in burial habits and artistic achievement, and, lastly, a wealth of cultural information concerning them; a settlement, on the other hand, gives us of this last in an amplified form, contributing details of a people's everyday avocations and cultural status; and further it may, if reasonably undisturbed and continuously occupied, give us with a certainty to be achieved by no other method whatsoever the typological and chronological relation of one succeeding civilization to another.

In the present state of our knowledge of Predynastic Egypt, formed almost entirely on cemetery evidence, the careful dissection of undisturbed middens up and down the Nile Valley may confidently be predicted to increase our grasp of the intricacies of the subject more than the clearance of another hundred prehistoric cemeteries will do. Local priorities and sequences of pottery classes will be revealed by these means, without which it would seem impossible to lift on a further stage the infinitely complex problems connected with the origins and inter-relations of certain classes of Early Predynastic wares.

It is unreasonable to look for uniformity of sequence throughout the great length of Upper, Middle, and Lower Egypt, each exposed to different sets of external stimuli and tribal movements. A stratigraphical method working in close collaboration with cemetery evidence, each checking the other, each contributing detail lacking in the other, seems the only hope of unravelling these complexities. In this connexion the importance of an adequate knowledge of flint-work must be urged as fundamental: for archaeological stratification may be based on changes of flint types imperceptible to those unacquainted with this class of evidence.

Flint implements record as surely as the pottery, and in some cases probably even more sensitively, a change in the habits of the people, or even in the population itself. For whereas in primitive societies woman—the traditionally conservative being, secluded from contact with the outer-stirring world—has from time immemorial fashioned the pots,

may we not guess that man—the traditionally more progressive being, in touch with the innovations of a wider world—has made the flint tools and weapons?

Yet the indifference displayed by Egyptologists in general towards this groundwork of prehistory is well reflected in the collection and presentation of flint implements in the Cairo Museum—a collection incomplete, unclassified, without history, or referential value; and this, not only in the most excavated country in the world, but also the richest in flint work of all ages.

PREVIOUS SETTLEMENT EXCAVATIONS

II. TOUKH

With Jacques de Morgan lies the credit of the first attempt to deal responsibly with the evidence afforded by the excavation of midden-mounds. His results are given in *Recherches sur les Origines de l'Égypte*, 1896, a work as extraordinarily inaccurate in some respects¹ as it is penetrating in others. Unfortunately his researches took place before the difference in age of various pottery classes had been realized through Sir Flinders Petrie's work; and since de Morgan, as usual, gives no account of his field methods, one is left to speculate whether his failure to perceive and interpret his pottery evidence was due to imperfect excavation technique or lack of archaeological stratigraphy in the mounds he excavated. With the advantage of our present slightly diminished state of ignorance, it may be inferred from his illustrations that the midden at Toukh—the most prolific in objects of those he examined—mainly belonged to the period of the decorated pottery, whilst the admirably illustrated flints, for the most part, belong to the series which the Hemamieh settlement shows in its upper, Middle Predynastic, levels.

12. BÊT KHALLÂF

Besides this work of de Morgan's, two other Predynastic settlement sites in Upper Egypt have been published in some detail, though in neither case is much indication given of the method of work and record, nor to what extent it was en-

¹ One instance of many is his amazing statement that the implements of the Fayum industry never lie below the 90-metre contour line above the lake. Were it not for an accompanying geological section, and other impressive topographical details, one would charitably regard this as a misprint. The fact is that about 90 per cent. lie between the 55-63-metre contours above the lake.

deavoured to treat the sites stratigraphically. It is, however, apparent that one of these sites, Bêt Khalláf, near Abydos, dates back farther than the other one at Abydos itself.

In the Bêt Khalláf settlement, recorded by Professor GARSTANG (*Maḥasna and Bêt Khalláf*, 1900-1), the ground had been seriously disturbed by *sebakḥīn*, as well as encroached upon by tombs of Early Dynastic age. Reference is, however, made to undisturbed patches.

No depth is given of the deposits, but it may be deduced from the inventory of the objects collected that the settlement had a fairly long range in time, dating back to the period of the white-cross-lined pottery and disk mace-heads; the presence of concave base arrow-heads is also, in my opinion, a warrant of an early date. Only two small pieces of copper were found. These indications of an early element in the settlement are supported by the contents of the cemetery some two miles distant, for which a range from S.D. 32-56 is given, with a central date of S.D. 36-38.

A point of particular interest, now corroborated by evidence from the North Spur Hemamieh site, is the occurrence of lines of upright wooden posts or stakes in position. These appeared to be restricted almost entirely to the north corner of the settlement. Since their arrangement precluded the interpretation of these stakes as the supports for rectangular or circular dwellings, Garstang points out the probability that they represent the uprights of a wind-screen shelter. This is the view adopted at my own site, where a comparison could be made with the structure of true hut circles.

In another part of the Bêt Khalláf site were found traces of mud walls, as well as a construction held at that time to be a pottery-firing kiln, but proved later by a similar discovery at the Abydos settlement to be a corn-parching structure.

13. ABYDOS

The other Predynastic settlement treated in some detail is that at Abydos, published by Professor T. E. PEET (*Cemeteries of Abydos*, Parts II and III, 1913-14). This lay about 100 yards from cultivation, behind the Seti Temple, and covered a roughly circular area about 30 metres in diameter. The deposits were between 3 and 4 ft. thick, and were examined in trench sections. The whole area was dug over, but no other details of the actual work are furnished, beyond the statement, "it is not

possible to distinguish chronologically any of the strata from any other, the settlement representing a single period, and that probably not a long one." This estimate, based on the pottery, which, though principally of rough unornamented types, included Late Predynastic wares, decorated and wavy-handled, is borne out by the illustrations of the flints; these include a big proportion of forms which unquestionably belong to the later periods. Only one arrow-head is figured, and that is a small tanged and asymmetrically barbed specimen, one of a variable type rare in the Nile Valley Predynastic, more frequent in the Protodynastic, and persisting apparently throughout Dynastic times,¹ with belated survivals in the Sudan,² into the seventh century B.C., and doubtless much later.

No "wind-screen" stakes were found, but a powdered grey mud is mentioned as being probably the débris of huts. Hearths were on the south side of the settlement, i.e. to leeward of the prevailing wind. A discovery of considerable importance in this settlement was the series of corn-parching kilns, proving for the first time beyond question the practice of organized agriculture.

14. BALLAS

Yet another Nile Valley settlement which, though of no great value owing to the scantiness of deposit depth, varying from $\frac{1}{2}$ in. to 2 ft. only, yielded its quota of information, is that of Ballas (*Naqada and Ballas*, by W. M. FLINDERS PETRIE and J. E. QUIBELL, 1896, p. 2). This site provided further examples of corn-parching kilns, although here, as at Bêt Khalláf, their condition was too fragmentary to permit of correct attribution at the time the discovery was made; other objects recovered include spindle whorls, querns, and a slate palette.

15. NUBIA (MERIS-MARKOS)

In connexion with the very numerous cemeteries so carefully dealt with by the *Archaeological Survey of Nubia*, 1907-10, it is disappointing to the prehistorian to find that only one settlement is mentioned; in a region of the Nile Valley singularly rich in pre- and protohistoric data it is inexplicable that settlements should not have been found in considerable quantities had they been searched for as valuable adjuncts to cemetery excavations. The

¹ *El Amrah and Abydos*, Tomb 29, xviiith dynasty.

² *Tombs of the Egyptian XXV Dynasty at El Kurrow, Dongola Province*, G. A. REISNER.

area is now lost to us for ever, under the artificially raised water-level of modern irrigation schemes. As a result of this omission, the chronological sequence of the A and B groups rests upon the insecure foundations of cemetery deduction. The one settlement discovered, the Archaic Camp at Cemetery 41 (*Archaeological Survey of Nubia*, Vol. I, by G. REISNER, pp. 215-218), produced material of much interest; the site was, however, half cleared by the workmen before the arrival of the Director, and its scientific value thereby was considerably reduced. No depth is given of the deposits, but its area was small. The camp contained sixteen hearths or fireplaces, packed with ash and charcoal, but no structure of any kind was met with. The facies of the pottery figured is Late Predynastic verging on the Protodynastic, and the presence of nine ground stone celts in this context, if their contemporaneity could be relied upon, is particularly interesting in view of the rarity of this implement in Egypt, and the persistency of its associations there with the earliest period.

CHAPTER IV

THE HUT CIRCLES

16. GENERAL ASPECT AND CONSTRUCTION

There were nine mud hut circles; as this appears to be the first discovery of these interesting relics, the subject will be dealt with in some detail. The use of wattle and daub in the construction of the earliest dwellings had long ago been inferred, and in fact material indicating the fragmentary remains of such huts in prehistoric times was recorded at Maḥasna by Professor Garstang. All that is known to us of their form, however, was derived from a single clay model of a house, discovered in a Predynastic tomb at El Amrah in 1900 (*El Amrah and Abydos*, 1899-1901, by D. RANDALL-MACIVER and A. C. MACE, p. 42). This shows a rectangular building, estimated by the probable scale of the doorway as about 25 ft. long by 18 ft. wide. The doorway, which seems to have been made of logs of wood, is at one side, whilst two small windows, framed also in wood, are let in near the top of the opposite wall. It was suggested by the discoverers that the house was built of wattle and daub. The grave in which the model was found is dated between s.d. 44 and 64, i.e. the decorated pottery period. This is important, as our circular Hemamieh dwell-

ings are well beneath the decorated pottery level, and sherds of this ware occurred only in the top of the hut fillings. It is possible to account for this radical difference in form of dwelling by insisting upon the poverty of the Hemamieh inhabitants—and the probability that the El Amrah model represents the habitation of a wealthier owner. But I would suggest that it is at least equally possible that this change from circular to rectangular dwelling is only one more of the many fundamental changes which creep into Nile Valley arts and crafts round about s.d. 40. Be that as it may, the excellent preservation of the Hemamieh specimens enabled the questions concerning their form and structure to be more certainly resolved.

The circles varied considerably in diameter.

—	Internal Diameter.	Thickness of Walls.	Height of Walls.	Depth Beneath Surface.
No. 249	7' 0" × 7' 0"	1' 2"	2' 0" (existing)	2' 0"—2' 6"
No. 252	6' 0" × 6' 6"	1'—1' 3"	2' 9"	3' 0"
No. 248	6' 0" × 6' 0"	1'—1' 2"	2' 6" (irregular)	3' 0"
No. 197	6' 0" × 5' 7"	1' 3"	1' 9"	1' 4"
No. 225	5' 6"	1' 0"	1' 6"	1' 0"
No. 265	4' 6" × 4' 6"	1' 2"	2' 0"	3' 3"
No. 268	4' 0" × 4' 2"	1' 2"	1' 8"	1' 6"—2' 0"
No. 112	3' 8" × 4' 1"	1' 2"	2' 5"	1' 3"
No. 242	3' 0" × 3' 0"	1' 3"	2' 6"	3' 0"

It is apparent that not all of these were used for human habitation; and in one instance at least, no. 112, the function of the circle was obvious; it was the fuel store.

The walls were made of mud into which, by accident or intention, small limestone chips had been introduced, as well as a few blocks of considerable size—in one instance as large as 15 × 11 × 11 cm. (pl. lxvii, 1). In some cases the imprint of stalks, pressed against the mud whilst still moist, proved with certainty an outer layer of vertically set bundles of reed or straw (pl. lxvii, 3).

The interiors of the huts were of plain, smoothed, dark grey mud, the walls of which merged without break into the slightly concave floor. In cases where the relatively hard stem-impressed coating had disappeared, it was a matter of difficulty and uncertainty to define the base level of the walls on their *exterior*, since their constituent material differed so little from the soil in which they were buried, and into which they had, in all probability, been to some extent scooped out. On this account the basal levels shown in the cross sections (pl. lxiv)

must not be taken too literally. The *interior* line there shown, however, is correct, as is the thickness of the wall. The north face of hut circle 252 provided the most certain indications of the original exterior depth, as the vertical reed imprints extended down 3 ft. 4 ins. from the top of the wall, or 7 ins. beneath the inner floor level. The height of the walls on the interior, on the other hand, left no element of doubt, since the beaten mud floor remained firm and distinct beneath the filling.

These mud walls are clearly little more than a skirting and support for a superstructure of thatch or other substance. No trace of any roofing material was, however, discovered, and it is probable that wind, man, or browsing goat would speedily remove all vestige soon after the huts fell into disuse. No. 249 had a stout untrimmed post of tamarisk wood, the bark adhering, 14 ins. long, with a circumference of 9 ins., driven into the ground on the east side, so close to the wall as nearly to touch it. The post almost certainly had a structural function, since circle no. 265 produced two more, in this case on the south side, close up to the wall, and within 10 ins. of each other. These also were of tamarisk, with lengths of 12 ins. and 17 ins. respectively. It will be noted that the posts are on the side sheltered from the prevalent north-west wind; if they were used as supports for roof-lashings, one would have expected to find others, of which I could see no trace. The mud skirtings were made in a continuous circle, and this suggests that the aperture into their interior was in the superstructure at its junction with the wall. If this were so, ingress would necessitate a drop of between 1 ft. 6 ins. to 2 ft. 9 ins. according to the height of the wall above the floor. There were no traces of steps down, though in circle no. 249 a large flat limestone slab found in the interior might have served such a purpose. This hut circle, however, was cut into and partially destroyed by two Old Kingdom coffin burials, and its evidence cannot therefore be considered with confidence.

These sunk hut foundations are indeed, both in dimensions and structure, apparently so unpractical, that one would be inclined to regard even the larger of them as store houses only, were it not for the evidence of no. 248, which had unmistakable indications of a hearth on its north-west side. Details of the individual contents of the hut circles, and their external relations, will now be recorded. The evidence for their age will be considered (1) *Inter-*

nally: i.e. in relation to (a) their oldest contents; (b) their later filling; (2) *Externally*: i.e. in relation to (a) underlying material, (b) material from their own level, (c) material overlying.

For the benefit of those undesirous of following in text and plans inevitably complicated detail, a summary of the evidence for their age is given in Section 18 at the end of the chapter.

17. CONTENTS OF THE CIRCLES

No. 112, Area 45 (pl. lxvi, 4)

Internal top diameter, 3 ft. 8 ins. \times 4 ft. 1 in. Interior wall height, 2 ft. 5 ins. Depth beneath surface, 1 ft. 3 ins. Imprint of stems on the exterior. Two sherds of rough red ware, full of straw, were embedded in the wall. The walls converged slightly towards their base, and sloped off into the mud floor; the standing-room would consequently be some 12–14 ins. less in diameter than the top. The circle was filled with desiccated sheep or goat dung to within 1 ft. of the rim.

Evidences for age: internal. Nil.

Evidences for age: external. The hut was sunk through an old hearth (see pl. lxiv) and its base appeared to rest upon the breccia stratum. It may be objected that the hearth extending both sides of the circle might have been in use simultaneously with the hut, sheltered by its presence; but it seems improbable that fire would have been permitted in the proximity of such inflammable material as wattle. The hearth, in any case, overlies Badarian combed sherds (Plan 82c and 82f, pl. lxxiv, 226, and pl. lxxv, 253) as well as a broken flint blade, with the shallow bifacial pressure flaking found upon the better class of Badarian flint-work (Plan 110h, pl. lxxxiii, 171).

The objects immediately overlying the hearth include two pieces of black-topped ware (Plan 76 and 198, pl. lxxiii, 149, and pl. lxxvii, 6), a sherd with incised herringbone decoration (Plan 110, pl. lxxiii, 147), of a type found later inside circle no. 248; and a broken biconical mace-head in green porphyry (Plan 100, pl. lxxii, 143). All these objects most probably belong to a late phase of the Early Predynastic, or an early phase of the Middle Predynastic. The decorated sherds of the vicinity, Plan 200–202, and 83, 89, 90, and 93, lie on a level with, or slightly higher than, the *top* of the circle wall. The hut is therefore certainly earlier than those decorated sherds, and is probably contem-

poraneous with objects nos. 76, 100, 110, 198, say round about s.d. 38-45.

No. 197, Area D

Internal top diameter, 6 ft. \times 5 ft. 7 ins. Interior wall height, 1 ft. 9 ins. Depth beneath surface, 1 ft. 4 ins. The mud walls showed no trace of "wattle." The floor was only very slightly concave. The base rested on limestone breccia. The filling was of clean dust and limestone chips.

Evidence for age: internal. Nil.

Evidence for age: external. Nil, since the circle lay at the south-west corner of the settlement, where the ground was noticeably clean, and sloped off down to the bounding gully.

No. 225, Area E

Internal top diameter, about 5 ft. 6 ins. Interior wall height, 1 ft. 6 ins. Depth beneath surface, 1 ft. About one-third only of the circle remained, and the presence of a coffin, no. 226, Old Kingdom by inference, pushed into the interior, denoted the causes of its partial destruction. The hut base rested upon limestone breccia.

Evidences for age. The circle is obviously useless for dating purposes; the most that may be deduced from it is that it was already hidden by overlying scree when the Old Kingdom people dug a grave into it, since they would hardly have tried to fit a 6 ft. 2 ins. coffin into a space only 5 ft. 6 ins. wide, had they been aware of the mud walls.

No. 242, Area F-G (pl. lxvi, 3)

Internal top diameter, 3 ft. \times 3 ft. Interior wall height, 2 ft. 6 ins. Depth beneath surface, 3 ft. The circle was incomplete on its north side. No "wattle" imprint visible. The floor was distinctly concave. The use of this circle, too small for a dwelling, is not clear.

Evidences for age: internal. The filling was of dark midden material with sherds, and the following objects were found: (1) On a level with the top of the walls, three pieces of rough village-ware rims. (2) Towards middle level of filling: (a) a fragment of incurved rim of a bowl, plum-red, polished, resembling *corpus* types, P24^M, s.d. 57-64, P23^B, s.d. 41-72, P27^L, s.d. 47; (b) a decorated sherd with spiral (pl. lxxxv, 210). (3) On floor level: two sherds of red-polished ware, and a pierced *Conus* shell. (*Conus* sp., near textile L. Red Sea, etc.)

Evidences for age: external. A straight mud wall 27 ft. in length, no. 261b, terminated immediately upon the north (destroyed) side of the circle wall. This wall is, I believe, of later date than the circle and bears no structural relation to it. The hut circle was overlain by a thick lenticular wedge of compact grey ash about 2 ft. from the surface, and which sagged down somewhat into the aperture. Now a similar hearth was found to overlie hut circle 265 in a like manner, and produced a decorated sherd lying actually *upon* it (pl. lxvii, 4). The sag may be attributed to the more loosely consolidated filling of the underlying hut circle. It is evident that these hearths were in use after the abandonment of the circles, and it is of the utmost importance, for our purpose, to note their stratigraphical relation to the decorated sherd levels. On this point there is no doubt; the main run of this type of pottery is definitely later, as may be seen from the table (Section 9). Since, however, we have the decorated sherd with spiral decoration from the hut filling *beneath* the sealing of the overlying hearth, and other sporadic finds of this class of ware occur at lower levels, we must acknowledge on this site a period of considerable range within the Middle Predynastic period itself; and the hut circle occupation must be, I think, attributed to a very early phase in that development, better perhaps described as a transition period round about s.d. 40.

No. 248, Area F-G (pl. lxvi, 1, 2, 3)

Internal top diameter, 6 ft. \times 6 ft. Interior wall height, 2 ft. 6 ins. Depth beneath surface, 3 ft. The walls in this case bore the impress of plant stems, and traces of a fibrous vegetable texture hung in the grooves; but this crumbled to dust in the attempt to preserve it. The circle was complete. There was a distinct concavity in the floor. The base of the structure appeared to rest on the limestone breccia deposit, which at this spot was slightly hollowed out, though not artificially as far as I could judge.

Evidences for age: internal. The filling was of blackened midden material, with the following contents: (1) On level with the wall tops: (a) an incurved rim of rough, unpolished red ware, (b) a rim. Neither of these can be typed with any safety, but they are hardly earlier than s.d. 50. (2) At 9 ins. beneath wall level, two rims of rough village ware. (3) At 1 ft. beneath wall level: (a) base of a small, rough red pot, impossible to type, (b) per-

forated pottery disk in rough village ware. (4) At about 1 ft. 6 ins. beneath wall level, a polished plum-red sherd. (5) On floor level: (a) two fragments of incised herringbone decoration sherds (pl. lxxxv, 211), similar to Plan 110, 270d, and 346, (b) a rim of rough red pottery, (c) a blackened patch of hearth on the north-west side, from which we sifted a few grains of a carbonized cereal; from the side of the hearth were collected a few uncarbonized grains and chaff—all these have been determined by Dr. John Percival as grains of Emmer wheat (*Triticum dicoccum*), (d) a small nodule of malachite, and a staining of green mineral upon the mud floor, (e) mandibular ramus of *Sus* sp. The only sherds which are individual enough to help us here in the dating are the incised sherds with herringbone decoration. In the case of circle no. 112 it has already been suggested that this type of pottery would appear on the general stratigraphical external evidence to be contemporaneous with the circle. This conclusion is supported by the present internal evidence, and survives the still further test of the levels of the only two remaining fragments of this ware found on the site, namely Plan 270d and no. 346. These were found at 3 ft. and 3 ft. 6 ins. respectively.

Evidences for age: external. Nil; with the exception of rough village ware nothing is recorded from the immediate vicinity.

No. 249, Area E-F (pl. lxvi, 1, 2, 3)

Internal top diameter, 7 ft. \times 7 ft. Interior wall height, about 2 ft. but irregular. Depth beneath surface, 2 ft.—2 ft. 6 ins. The walls were of rough, unsmoothed mud; a large lump of limestone intruded into the top of the north wall. A stake of wood was driven into the ground outside the walls. The circle walls were cut through, on the east and west sides, by two coffin burials, nos. 250 and 254 of the Old Kingdom, the apertures giving the erroneous effect in the photograph, pl. lxvi, 3, of intentional entrances. The grave-digger had in neither case dug down to the floor level of the hut, and here again it seems improbable that the existence of the circle was suspected. Upon the top of the south wall reposed one of the pyramidal stacks of animal bones described in Chapter V. This stack, no. 223, was fragmentary and without the capping head, but the bones belonged to an immature *Bos*. About 9–12 ins. of dust had accumulated over the top of the wall before these animal bones were

placed there. The stack in position over the circle wall is seen in pl. lxvi, 3, and was also photographed as one of the group of six seen in pl. lxviii, 3, before the presence of underlying circles was suspected.

Evidences for age: internal. On account of the complete disturbance caused by the two burials, the contents down to the level of the coffins are valueless; they include a sickle-flint, a fragment of buff-coloured porous ware, possibly belonging to a wavy-handled pot, and two other bits of coarse village ware. Two sherds, a piece of black-topped ware and red-polished ware, from the floor level, and under the coffins, may however possibly be undisturbed. An interesting find was the mandible of a pig, imbedded in the hut wall. (Compare Circle no. 252.)

Evidences for age: external. Nil. The objects recorded in its neighbourhood are Badarian sherds on the south side (Plan 215, 215a, 215b, 215c, 217b; pl. lxxiii, 173, 178, 174, 183), and Plan 217a is a small Badarian flint blade (pl. lxxxii, 135, and pl. lxxiii, 195). All of these are at the 4-ft. level. The proximity, however, of burial no. 217 renders it necessary to accept their position with caution, although all specimens were rejected at the time which appeared to me suspect.

No. 252, Area E-F (pl. lxvii, 2, and pl. lxvi, 3).

Internal top diameter, 6 ft. 6 ins. \times 7 ft. Interior wall height, 2 ft. 9 ins. Depth beneath surface, 3 ft. The circle was incomplete on its south side. The walls, as regards the stem imprints upon them, were the best preserved of all the circles, being traceable for a vertical height of 3 ft. 4 ins. Several good lumps of the material were cut away and successfully packed for England (pl. lxvii, 3). On the interior the walls were straighter than in other cases, and gave a floor measurement nearly equal to the top diameter. The base of the hut rested on loose limestone scree and dust overlying the breccia.

Evidences for age: internal. (1) About level with the top of the wall: (a) a circular flint scraper, broken, but with good marginal retouch (pl. lxxxv, 212); (b) a small core implement (pl. lxxxv, 213); (c) a decorated sherd showing part of a triangle which probably forms one of the row of pyramidal hills familiar in certain of the later decorated vases (pl. lxxxv, 214).

(2) At about 1 ft. below the top wall level: a rough "village-ware" rim.

(3) At 1 ft. 6 ins.: (a) A very much rolled flint flake

of eolithic aspect. The percussion bulb is well developed. The flint bears a deep desert patina, and is in addition very glossy, an effect usually attributed to sand friction in running water. As Predynastic people were ever partial to the collection of glistening objects, the inclusion of this strange anachronism in a hut circle of Early Middle Predynastic age is attributable to this propensity.

(b) A coarse brown sherd with burnished surface.

(4) On floor level. A nodule of malachite; two unrelated pig mandibles, a fish bone (probably *Lates niloticus*), a knot of dried stems (*Astericus Graveolens*), and a plain clay jar stopper. There was no sign of a hearth.

The occurrence of the decorated sherd in the top filling at 3 ft. beneath the present ground surface points to the conclusion already drawn in the case of circle no. 242; i.e. that the circle was in occupation prior to the period when decorated pottery became relatively plentiful on the site.

Evidences for age: external. Beneath the hut circle, at a depth of 7 ft., and partly protruding outside its radius, was a fragmentary contracted burial, no. 256. The decayed bones showed the body to be oriented, head 35° west of south, and to be lying on the left side. The right arm was bent across the chest. The knees appeared to have been loosely flexed. Beside the body were three sherds: a Badarian combed sherd in coarse red ware with black interior; a Badarian combed sherd in coarse black ware with curved base; and a sherd of rough village ware. To what extent may we venture to consider this burial as of Badarian age? Whilst this cannot, obviously, be a certainty, yet the presumptive evidence is strong; the orientation and posture are Badarian; the level is essentially Badarian; the associated objects, though not conclusively belonging to the burial, are also Badarian. In any case the burial must antedate the hut circle erected over it. The south-west wall of the circle is seen in pl. lxvii, 2, with the hole containing the burial beneath it. Beneath the hut, also upon the breccia, but not closely associated with the burial, were found three pieces of rough red ware, and a rough worked flint (pl. lxxxv, 215).

The base of the hut circle, as was the case in no. 112, is sunk through a well-defined hearth at 5 ft.; these two hearths link up together in a continuous whole on a north-south line, diagonally to my line of sections, and follow on again at a slightly higher level into the streak of hearth to be recorded in

Area A3 (pl. lxiv). Beneath, or in, this hearth, within a few feet of the hut, were found the following Badarian sherds: Plan 255a, 255b, 228d, 256c, pl. lxxiv, 224, 233, 229, and Plan 256c, pl. lxxv, 248. In addition an apparently ordinary black-topped sherd, 228e, was also found on the breccia beneath the hearth. The intermediate levels produced no good dating objects except a wavy-handled sherd, Plan 207a, pl. lxxii, 94, at 2 ft. 6 ins. The decorated pottery is here again confined to the top level, well above the circle walls, and is clearly of later date.

No. 265, Area G (pl. lxvii, 4)

Internal top diameter, 4 ft. 6 ins. × 4 ft. 6 ins. Interior wall height, 2 ft. Depth beneath surface, 3 ft. 3 ins. A small portion of the walls was missing on the north-west side. The floor was slightly concave, and had a diameter of about 3 ft. 10 ins. Two upright posts of tamarisk wood stood outside, nearly touching the walls.

Evidences for age: internal. Nil. The filling contained no objects.

Evidences for age: external. As in the case of circle no. 242, a compact mass of grey ash overlay the interior filling, sagging down into it at a level with the top of the walls. Pl. lxvii, 4, shows in the foreground the curve of the rim of the half-disengaged circle wall, with the overlying section containing the mass of ash, as well as a band of hearth at a higher level, the two being separated by a seam of angular pebbly scree, which probably collected rapidly during any interlude of occupation. It was extremely disappointing to find that the hut filling, so perfectly sealed in, should have produced nothing. A compensation was to some extent, however, provided by the occurrence of a decorated sherd, Plan 238, pl. lxxi, 74, lying on the sagging hearth. The most interesting object in the immediate vicinity to the hut is a fine flint knife, Plan 264a, at 4 ft. 6 ins., or level with the hut floor (pl. lxxxiii, 154, and pl. lxxiv, 206). This type appears to belong exclusively to an Early Predynastic period. A little Badarian knife-blade, Plan 276, pl. lxxxii, 130, came from 5 ft. distant, at a depth of 4 ft. lying on settlement bottom. Of later objects, an incised sherd with herringbone decoration, Plan 270d, pl. lxxii, 121, came from the 3-ft. level on the north-east side of the hut (compare circles 248 and 112). A sherd decorated with spiral came from the same level near by.

No. 268, Area H (pl. lxvii, 5)

Internal top diameter, 4 ft. \times 4 ft. 2 ins. Interior wall height, 1 ft. 8 ins. Depth beneath surface, 1 ft. 6 ins.—2 ft. This circle had rough mud walls retaining no trace of plant stems. The interior sides were vertical and the floor dimensions were approximately the same as the top measurement. An ashy deposit overlay the circle (seen in the plate as lighter in colour) and continued for some distance immediately beneath the surface.

Evidences for age : internal. 1. Level with top of wall, a decorated sherd with spiral (pl. lxxxv, 216). 2. Then nothing, until very near, or on, the bottom : (a) an oval end and unilateral side scraper on a thin flake, the upper-face retaining the cortex, and a plain flake under-surface with bulb (pl. lxxxv, 217) ; (b) an oval end scraper on a pointed flake, slight thinning retouch on the bulbar surface (pl. lxxxv, 218). Both of these flints belong to types seen most plentifully in the 3 ft. 6 ins. level of the settlement (compare pl. lxxxv, 218, with pl. lxxxi, 107). (c) A flake of calcite crystal, unworked. (d) A natural smoothed and polished flint pebble, as used to grind malachite. (e) A lump of mud, stained green by malachite. The mud floor was accidentally cut through during clearance and it is not clear whether (e) formed part of the floor. It seems probable.

Evidences for age : external. The most important object is Plan 271, a complete wide-mouthed bowl of black-topped ware, standing on the breccia, here only 4 ft. from the surface, at the base of the hut wall ; pl. lxvii, 5, shows the outer wall with pot *in situ*. The type is one which had a long range in sequence-date chronology, and the *corpus* specimen most nearly resembling our vase is B 18k. After careful deliberation on its position in relation to the hut circle, I came to the conclusion that the two were unlikely to be contemporary. That the breccia was already covered by débris, mainly of Badarian age, when the circles were built, is, on the evidence of the whole site, certain ; and, as I have already suggested, it seems probable that the hut foundations were laid in scooped-out hollows of the old rubbish ; whilst the occupants entered them from an exterior level very little, if at all, below that of the mud wall skirting. I should therefore be inclined to exclude a sequence date much after 40 for this bowl ; nor do I judge that its occurrence in this position invalidates the cumulative evidence of age already given for the other circles. A point of far greater perplexity is, however, raised in connexion

with its relation to the Badarian. The breccia surface here, as elsewhere, produced its average collection of combed sherds (Plan 360, 354, 353, 349, 335), as well as the little characteristic Badarian blade Plan 357, pl. lxxxiii, 158. We have, however, to remember, and take into account, the other finds of ordinary black-topped sherds at the lowest level on the breccia—for instance, Plan 18, 113, 227a, 228e, and 296, and others. It suggests a considerable overlap of cultures at the end of the Badarian period extending possibly well on into the thirties.

This completes the list of hut circles ; but before summarizing the results, a few subsidiary structures must be dealt with, namely, two store holes nos. 236 and 261a, the 27 ft. mud wall no. 261b, and the line of wooden posts towards the north of the settlement.

No. 236 (pl. lxvi, 5)

This was a small mud-plastered hole, with a diameter of 1 ft. 10 ins. at its mouth, found 1 ft. beneath ground level at a spot where the breccia floor was irregular and sloped up to within 2 ft. 6 ins. of the surface. The orifice only of the hole was plastered ; the main body of the hollow swelled out into an unlined cavity scooped out of the breccia, 1 ft. 6 ins. deep. In this were discovered two or three fragments of common pottery, a *Conus* shell, and a roughly made end scraper.

No. 261a

A smaller store hole, 12 \times 12 \times 12 ins., with mud-coated walls, but with a base formed not of mud plaster but of a large flat slab of limestone. The filling contained nothing of interest.

No. 261b. Mud Wall

This was 27 ft. in length, about 1 ft.—1 ft. 4 ins. wide and 2 ft. 6 ins. high, running approximately north-south, and about 2 ft. beneath the surface. It was laid out along a line following the natural contour, and consequently ran at about the same level throughout its length. Its northern limit ended abruptly, giving an impression of incompleteness. Its southern end terminated at hut no. 242, the circle of which had been partially destroyed by its erection. The hearth so prominent above this hut circle lapped up to the base of the wall and appeared to be contemporary with it. Unfortunately the photographs showing the relation of these buildings were destroyed in a fire at our

dwelling at Badari, when a number of negatives were burnt. The structure of the wall itself varied little in composition from the circles, being made of rubbly mud, smoothed over with a wet mud paste; in no place, however, did it bear traces of wattle impress. Its eastern face was supported by vertical wood posts, set regularly at about 1 ft. intervals. Two only of these stood as integrated wood; the remaining five showed little more than traces of brown powder. The regularity of those we accounted for leaves little doubt that a line of them extended right along the wall. At 6 ft. from the southern end a short limb of wall projected at right angles. Several other posts were dotted about the neighbourhood, the most interesting being a line of twelve, closely but irregularly spaced, which bisected the wall at its northern end. All samples of these woods sent to Kew are said to be tamarisk. It is interesting to note that a similar line of posts was found by Professor Garstang on the Bêt Khallâf Predynastic settlement (*Maḥasna and Bêt Khallâf*, 1901); here, too, they were placed towards the north corner of the site, and Professor Garstang's interpretation of their function being a wind-screen support accords with the conclusion I drew on my own site.

Evidence for age. The objects lying alongside the wall on its western face are as follows:

1. Level with the top of wall, a group of three objects, two scrapers and a spindle whorl (Plan 262, pl. lxxx, 69-70).

2. About 6 ins. above the base of the wall, rim of an open bowl with black polished interior. About s.d. 36 (Plan 293, pl. lxxiv, 212).

3. Under the foundation of the wall at about 5 ft. a leaf-shape flake in green chert (Plan 295, pl. lxxxiv, 180).

4. At 6 ft. to 6 ft. 6 ins. upon the breccia, and about 1 ft. 6 ins. to 2 ft. beneath the wall base, a Badarian sherd (Plan 296a, pl. lxxvi, 279).

The objects lying alongside the wall on its eastern face are as follows:

1. Level with the top of wall, (a) decorated sherd, the pattern showing at least twelve parallel rush-bands, and possibly, therefore, *corpus* D 53c (Plan 261c, pl. lxxxv, 219). (b) End scraper on heavy oval flake; perpendicular end trimming extends less steeply along lateral margins, rectangular butt (Plan 261d, pl. lxxxv, 220). (c) Tip of a fine knife (Plan 261e, pl. lxxxv, 221).

2. About 6 ins. beneath wall top: (a) trimmed angular blade (Plan 261f, pl. lxxxv, 222); (b) an

end scraper on flake with rectangular butt (Plan 261g, pl. lxxxv, 224).

3. About 1 ft. beneath the wall top, a triangular flint flake with cortex butt, finely retouched on edges (Plan 261h, pl. lxxxv, 223).

4. At 5 ft. 6 ins., or 6 ins. beneath the wall base, lying on breccia, an ordinary red-polished sherd, plan 296.

18. SUMMARY OF EVIDENCE FOR AGE OF HUT CIRCLES.

No. of Hut.	Internal Evidence for Age.	External Evidence for Age.
112	—	<i>Overlies</i> Badarian sherds. <i>Level</i> with black-topped, incised herringbone sherds and biconical mace-head. <i>Underlies</i> decorated sherds.
197	—	—
225	Older than Old Kingdom coffin.	—
242	<i>Top of filling</i> , decorated sherd with spiral s.d., probably about 40-60. <i>Bottom of filling on floor</i> , 2 plum-red polished sherds.	<i>Underlies</i> consolidated hearth, which in turn underlies decorated pottery main level.
248	<i>Top of filling</i> , base small red pot. <i>Bottom of filling on floor</i> , 2 incised herringbone sherds.	—
249	Disturbed.	Disturbed?
252	<i>Top of filling</i> , decorated sherd with triangle.	<i>Overlies</i> "Badarian"? burial and Badarian sherds. <i>Underlies</i> decorated sherds.
265	—	<i>Overlies</i> flint knife no. 264a, 1st Predynastic type. <i>Level</i> with incised herringbone sherd and decorated sherd with spiral. <i>Underlies</i> consolidated hearth with decorated sherd.
268	<i>Top of filling</i> , decorated sherd with spiral. <i>Bottom of filling</i> , 2 oval end scrapers, suggestive of settlement middle levels.	<i>Overlies</i> black-topped bowl of early sequence date. <i>Overlies</i> Badarian sherds.

The conclusion to be drawn from this evidence is, therefore, that the huts were made between about s.d. 35-45, and had fallen completely into disuse not much later than s.d. 50.

CHAPTER V

THE BURIALS

19. INTRODUCTORY

Throughout my first season's work upon the settlement, during the clearance of the south-east

area referred to as A1-A6, we encountered singularly few elements of subsequent disturbance: only five Protodynastic pot burials and an Old Kingdom skeleton were found.

Towards the end of the season, as we extended our work south-westwards, into area B1-B4, we were less fortunate; several Old Kingdom, and other, burials were found, largely invalidating such stratigraphical evidence for the prehistoric periods as the area would otherwise have afforded. Therefore, whilst recording in plan many of the objects from this region, I considered it unnecessary to elaborate the order of things in section. It is, moreover, for this reason that the sections A1 and A2 are not carried on across the width of the site, as are the other sections. A short discontinuity would, in any case, have been unavoidable, since owing to the up-creep of the dump-heaps on the south, the intervening space between A and B had become covered. Further, it is on account of the visual obstruction caused by these heaps that an error occurred in the true alignment of Area B—an error discovered too late for correction, but of no practical import. The strip lying between B4 and D, shown as unexcavated, was the province of local archaeologists, who, actuated by the spirit of scientific enquiry, left their other field-work during the months of our summer absence, and continued where we had left off. The dig, however, cannot have come up to local sample, for it was very speedily abandoned, and I was able upon my return the following season to carry on, with the precaution of a slight lift up to area D as shown. But we were not yet clear of Old Kingdom burial-ground, and my natural disappointment at finding this continuation of disturbing elements abated only when it became apparent that they too, in an unforeseen manner, contributed their quota of chronological information, in connexion with the hut circles on the one hand and the animal bone stacks on the other. Indeed, but for them I should have had no clue whatsoever to the probable age of these latter. As our excavations gradually ascended the hill side we regained completely undisturbed settlement area, yielding, as given elsewhere, a further instalment of the desired information.

20. THE POT BURIALS

This small series, confined to Area A, in no way resembles the Old Kingdom method of burial under an inverted jar. Here the bodies had been placed

in pots which stood upon their bases. In one example only, no. 59, was there a cover. The age appears to be Late Predynastic to Protodynastic.

No. 11 (*Area A1-2*), pl. lxxvii, 1. A small pot burial of an infant. No objects were found with it, but the pot belongs to that series of coarse red Predynastic wares with a pointed base which are known to range from early to quite late sequence dates. The rim lay 2 ft. beneath the surface.

No. 13 (*Area A1*), pl. lxxvii, 2. Pot burial of an infant between 1 and 2 years of age.¹ The bones were fragmentary. The body had been wrapped in an undergarment of linen, over which a goat-skin had been placed; traces only of these remained. The rim of the jar was 5-6 ins. only beneath the surface; the pot was of badly fired, coarse, dull red pottery, probably Protodynastic. Its base rested upon two large stones intentionally placed beneath it.

No. 27 (*Area A2*), pl. lxxvii, 3. Pot burial of an infant, probably under 12 months old. No objects nor wrappings with it. The rim of the pot was 18 ins. beneath the surface; the ware was of good hard, but coarse, rough red material with a mixture of straw in it.

No. 59 (*Area A4*), pl. lxix, 3, 4, 5. A large double pot burial, in excellent condition, of an adult female. The body was placed in an upright sitting posture, and faced south-west. The knees were drawn up sharply on a level with the chin. Fragments of a linen garment adhered to them. The arms hung down the sides. There were unfortunately no objects with her. Over the body, and supported upon the rim of the lower jar, rested an inverted pot of approximately the same size, forming a domed lid. The great weight of this had cracked the lower pot in three places. The top of the lid was 8 ins. beneath the surface. A hole 4 ft. deep had been dug through the midden deposit to contain the pot burial. The complete reconstructed burial is now in the Museum of the Biometrical Dept., University College, and forms one of the best examples of this type of pot burial in the country. The jars are of thick, hard red ware, with rectangular rims. The age is probably Protodynastic (compare *El Amrah and Abydos* pot burials, nos. b175, b98, b182, p. 26, and pl. ii, 3).

No. 117 (*Area A6*), pl. lxxvi, 1, 2, 3. A variant of the pot burial was shown here, and consisted of a tightly contracted male body enclosed in a semi-

¹ I am indebted to Dr. E. H. Hunt, who happened to be visiting our camp, for examining the bones.

circle of six large stone blocks. Fig. 1 shows the first stage; at 1 ft. 2 ins. beneath the surface appeared half of a large red pot surrounded by blocks of limestone; Fig. 2 shows the next stage when these had been removed, disclosing the other side of the pot overlying another stone block. Beneath this again came a bed of clean sand, obviously imported for the purpose, which covered the body as seen in Fig. 3. The body lay head north, on the left side, facing east. The knees were drawn sharply up and touched the face. In this case again there were no antiquities, but on the pottery evidence the burial should probably be ascribed to the Protodynastic period also.

21. OLD KINGDOM BURIALS

(a) *Contracted*, in a simple hole. There was only one of this class, no. 98, in which the body lay on the left side with head south-south-east, the knees were flexed; the right upper arm lay parallel with the vertebrae, with the fore-arm bent across the pelvis. The left arm lay straight. Behind the head, tilted on edge, lay a carinated red polished bowl, dating to the iii-ivth dyns. A pair of large *unio* valves were found by the chest. By the side of the body was a flint single end scraper on a concave flake 10.5 cm. long. It is, however, probable that the implement, which looks typically Middle Predynastic, belongs to the filling, and its position by the body may be accidental. The burial was at 2 ft. 10 ins. beneath the surface.

(b) *In coffins*. In this class there were a dozen examples, confined chiefly to the area lying between the 14-20 ft. contour lines. In only five cases were there antiquities by which to date the graves; but on the uniformity of burial usage, it seems reasonable to attribute the remaining seven to the Old Kingdom also. In the plan, pl. lxiii, the orientation of the body is shown by a cross for the head, an arrow pointing in the direction the head was facing.

No. 133 (*Area B1*). Fragmentary. Head north-west, 305°; the body was extended on the left side, the knees very slightly flexed; it had been placed in a wood coffin at 1 ft. 8 ins. beneath the surface, the only remaining trace of which was a line of brown powder. The condition of the burials progressively improved as higher ground was reached.

No. 161 (*Area B3*). Was an extended headless body, oriented about 300°, only 6 ins. beneath surface. The only value of record is that it lay across,

and 2 ft. 6 ins. above, burial no. 169 of uncertain date.

No. 163 (*Area B3*). Fragmentary. Head north-north-west, 345°; the body was lying on the chest, face against the ground. There were traces of a wood coffin, 10 ins. beneath the surface; the position of the body suggests that the coffin had been placed in the ground upside-down.

No. 181 (*Area D*). Head north-west, 314°; extended on left side; knees very slightly flexed. Traces of a wood coffin about 6 ft. × 2 ft. 6 ins. × 1 ft. 6 ins., at 1 ft. beneath the surface. A cypraea shell (*Cypraea arabica* L.) was the only antica.

No. 189 (*Area B4*). Leg bones only, with traces of a coffin. Oriented north-west, 315°.

No. 195 (*Area D*). Fragmentary. Head north-west, 307°; extended on left side; knees slightly flexed. Traces of a wood coffin about 6 ft. × 2 ft., depth not determinable, at 2 ft. 6 ins. beneath the surface.

No. 196 (*Area D*). Good condition. Female. Head north-west, 321°; extended on left side; knees straight. Fairly solid remains of a wood coffin with dimension 6 ft. long × 2 ft. 3 ins. wide by 2 ft. deep. This burial compared with no. 195 affords one of those interesting and perplexing cases where two interments, side by side, apparently of the same age, at the same depth, and in the same soil, show totally different states of preservation.

No. 214 (*Area D-E*). Good condition (masc.). Head north, 352°; extended on chest, face against ground, as in no. 163. The legs were crossed right over left. A wood coffin 6 ft. × 2 ft.; 3 ft. from the surface.

No. 217 (*Area E*). (Grave 6501 in *Qau and Badari I.*) Poor condition. Female. Head north, 350°; extended on left side with slightly flexed knees. Traces of a wood coffin 5 ft. 2 ins. × 2 ft. 4 ins. × 2 ft. On the chest an oval green steatite button seal of fine workmanship, with a design cut in the under face of two men joining hands over a crocodile; the top face, which forms the handle, consisted of a realistic frog. Three beads were also found, a steatite flattened lentoid, and two tubular green glaze. Late vi-viith dyns. (Cairo Museum).

No. 224 (*Area D-E*). Bad condition. The bones were those of a young child, head north, 350°, extended on the left side, knees slightly flexed. Traces of a wood coffin 5 ft. × 1 ft. 2 ins. at a depth of 1 ft. 5 ins. The bones were very badly preserved, but the burial was undisturbed. One carnelian

disk bead only was found. The burial is important by reason of the fact that it underlay the pile of animal bones no. 210.

No. 226 (*Area E*). Much broken up. Orientation north-west, 325°. Body fragmentary. Traces of wood coffin, about 6 ft. 2 ins. × 1 ft. 6 ins. at a depth of 2 ft. 6 ins. This had been sunk into hut circle no. 225.

No. 234 (*Area F*). Disturbed and fragmentary. Orientation north-west, 330°. No head; extended on left side. Coffin traces only, 2 ft. beneath the surface.

No. 235 (*Area F-G*). Disturbed and fragmentary. Head north-west, 315°; extended on left side, with slightly flexed knees. Traces of a wood coffin about 5 ft. 7 ins. × 1 ft. 5 ins. at a depth of 1 ft. Fragments of a pot dated the burial to iv-vth dyns.

No. 250 (*Area F*). Good condition. Head north-west, 325°; extended on left side with straight legs. Left arm bent with hand under cheek; right arm straight down the side. The coffin dimensions were 5 ft. 6 ins. × 1 ft. 3 ins. × 1 ft. 2 ins. Depth beneath surface, 3 ft. 9 ins. A string of 134 small white glazed steatite beads was collected. The burial had cut through hut circle no. 249. Beads of this type are rare, but a similar string came from a vth-dyn. tomb at Qau, and our specimens can doubtless be dated to about the same period.

No. 254 (*Area F*). (Grave 6502 in *Qau and Badari I.*) Good condition. Female. Head north-west, 335°; extended on left side with straight legs. Left arm bent with hand under cheek—right arm straight. The coffin, in good preservation, measured 5 ft. 4 ins. × 1 ft. 10 ins. × 1 ft. 8 ins. Depth beneath surface, 3 ft. 4 ins. It was bound with a twist of rope round the middle. The tomb contents were as follows: A small red-polished ware pot from the north corner. Strewn about the upper part of the body, both on and under, were beads and amulets, consisting of 4 barrel and 1 cylindrical carnelian beads; 2 cylindrical ivory, and 9 long tubular blue glaze beads; 1 "crumb" bead, and several small white disk beads, possibly egg-shell. The amulets were of particularly fine workmanship, and in perfect preservation, and consisted of 2 hands in steatite, 2 ivory flies, a chicken, a dog, and man's head, all in ivory. Date v-vith dyns. The group is now in Cairo Museum and is illustrated in *Qau and Badari I*, pl. xlviii.

22. BURIALS OF UNCERTAIN AGE

We are now left with five burials of uncertain age, but by inference, owing to the position of nos. 169 and 136, prior to the Old Kingdom; these had no coffins, and the orientation was south-west, the body lying on the right side. There were no antiquities.

No. 136 (*Area B1*). Head south-west, 233°; extended on right side at a depth of 2 ft. 8 ins. The hole measured 5 ft. 6 ins. × 2 ft. and lay partially beneath coffin no. 133.

No. 149 (*Area B2*). Head south-west, 220°; the body was that of a child, extended on right side. Eight mud bricks overlay the body. The hole was 5 ft. 10 ins. × 2 ft. Depth not recorded.

No. 156 (*Area B2*). Head south-west, 248°; extended on right side at a depth of 2 ft. 7 ins. There were 4 overlying mud bricks. The hole measured 5 ft. 1 in. × 2 ft.

No. 169 (*Area B3*). Head south-west, 218°; extended on right side, the body being surrounded by a square of rough limestone boulders. Depth beneath surface, 3 ft., being 2 ft. 6 ins. under the level of burial no. 161, which we have regarded as Old Kingdom.

No. 171 (*Area B3*). Head south-west, 244°; the body was that of a child, extended on right side, in a hole 3 ft. 8 ins. × 2 ft., and at a depth of 2 ft. 6 ins.

PREDYNASTIC BURIAL, POSSIBLY BADARIAN

No. 256 (*Area E-F*). For description of this see Chapter IV, Section 17, p. 86.

CHAPTER VI

THE ANIMAL BURIALS

23. THE OX BURIALS

A discovery upon this site, the full import of which must, in the absence of any record of a similar phenomenon, remain for the moment obscure, was the numerous, carefully arranged piles of animal bones, found at slight depth beneath the surface and confined to the region of the Old Kingdom burials. There was no sign of a prepared grave; the bones had been piled up in shallow holes dug to receive them in the soft *sebak* of the Predynastic settlement. In all there were thirteen of these burials, composed of the remains of young oxen. The bones, which had been carefully dismembered before their arrangement in this manner, and which were in most cases incomplete, were stacked without any apparent order beyond the

needs of balance ; with the exception of the animal's head, which was, in all cases where vestige of it remained, used to cap the erection, and was carefully oriented.

The missing bones showed no uniformity of absence and varied in each pile. There was no trace of fire upon them ; indeed bits of the hide still hung on to the bones. The diameter of the stacks averaged about 2 ft., and the height about 2 ft. to 2 ft. 6 ins. The top of the pile—the head—was in most instances so near the surface, though in no case did it actually protrude, that it was seldom found complete, and in some examples had vanished almost entirely. In the five stacks where the position of the head was certain, it was found to face what was locally doubtless considered to be north. No. 219 (pl. lxviii, 3 and 4) was a good example, and shows the widely spreading horns of the beast, 15 ins. in length. In this particular burial the following parts of the animal were noted as missing—mandibular rami, femora, sacrum, calcanea, astragali, and some vertebrae. There were no traces of coloration upon the bones ; nor are our heads bucrania in the accepted meaning of the term, for it is clear that the complete cranium was buried and not the frontal bones and horns only.

A reference to the general plan of the site (pl. lxiii), where the piles are shown as triangles, will indicate that their position in relation to the Old-Kingdom graves is too promiscuous to admit satisfactorily of the interpretation of ceremonial burial usage in connexion with the human interments ; moreover, a sacrifice of oxen, presumably an animal of some value, appears incongruous with the extreme poverty of them. As we have seen, graves no. 217 and 254 alone produced objects of any value, and the stacks show no more special topographical relationship to these two graves than to any others. All that may be noted in this connexion is that the number of graves whose orientation and construction point to one period is twelve, whilst the animal bone piles number thirteen. In the matter of age we are fortunately less at sea owing to the position of nos. 210 and 223. Pile no. 223 (seen in pl. lxviii, 3) was found to overlies the south wall of hut circle 249. The relation of the two to each other is seen in pl. lxvi, 3. The bones must, therefore, be later than the hut circle. How much later ? The answer is given by pile no. 210, which overlay the coffin burial no. 224 of the Old Kingdom (see Section 21). Now, it is quite im-

possible that the coffin should have been slipped in under such an unstable erection as a stack of bones without upsetting or disarranging it. The information given by the juxtaposition of these two is therefore conclusive ; the animal piles are not earlier than Late Old Kingdom. It may further be deduced with some confidence that they are not later. The site shows no vestige of occupants either living or dead after the vith dyn. (button seal in grave no. 254), when it was abandoned as a burial-ground ; and it is, in my opinion, most unlikely that these animal burials are later than the latest burial. I have weighed the possibilities of their being Pan-grave intrusions, the more especially in view of the fact that typical Pan-grave influence abounds in the Badari neighbourhood ; but on this particular site I found no trace of it. Nor is the Pan-grave method of arrangement the same as ours. We must distinguish between two different aspects of the animal burials known to us ; those placed sacrificially in human graves, and those given a burial separately, and apparently unconnected with human death.

24. In the Predynastic of Upper Egypt both types have been recorded, and this is also the case amongst the Pan-grave intruders of dynastic times along with their many other suggestive retentions of prehistoric practices and arts. But at Diospolis Parva, the usual custom, recorded at so many other Pan-grave sites, of including painted bucrania in the grave furniture, is practised alongside of the far rarer custom of animal burial unconnected with human graves. At Diospolis the arrangement of these last differs completely from our specimens ; the heads were collected together in considerable numbers and arranged in layers ; nor was there consistency in orientation, for west, south-west, east, and south-east are all recorded (*Diospolis Parva*, p. 46).

An animal cemetery devoted to goats and oxen is recorded by L. Loat, in *Gurob*, Chapter III, 8. This is considered to be of sixth-dyn. age.

In Nubia, from Early Predynastic to C-group times, animal burials occur frequently both in human graves and in separate tombs (*Archaeological Survey of Nubia*, Vol. I, in particular p. 139 ; *University of Liverpool, Annals of Archaeology and Anthropology*, Vol. VIII, pp. 3-4, Dakkah and Faras), but not, as far as I am aware, in separate cemeteries. On the other hand, a most interesting example of an elaborate and purely animal cemetery has recently been recorded from the Bisharin country

by G. W. MURRAY in the *Journal of Egyptian Archaeology*, Vol. XII, 1926, pp. 248-9. Three graves only out of about 340 were examined, but these contained the bones of oxen, cut up before burial, and placed in shallow graves. The only sherd found resembled Middle Nubian ware, and the cemetery is tentatively dated to a Post-C-group age.

I should like further to call attention to another record somewhat more strictly analogous to ours. This was found in the Ibis cemetery at Abydos and is described in *Cemeteries of Abydos*, Part III, by E. T. PEET and L. S. W. LOAT. The text, p. 44, says: "The head of an ox, on which were traces of linen; immediately underneath was the complete skeleton, the various bones being arranged in a more or less compact heap." No orientation is given. The plate in that volume (xvi, 4) shows the head, flanked by the large mud jars in which the ibis mummies were interred. These are considered to be of Roman age. The plate, however, does not give the impression that the ox-remains need necessarily be contemporary, though possibly it may be so.

At all events, it is evident that the practice of animal burials, whether separately or with human remains, has a long span of time in Egypt, dating back to Early Predynastic times, and it appears to belong to that portion of Nile Valley cultural heritage which is assignable to Hamitic tradition.

The bone piles are shown in plan (pl. lxiii) within triangles.

25. Details of the individual piles are as follows:

No. 173 (Area B4). A fragmentary and scattered heap of young bovine remains, only 6 ins. beneath the surface. There was no head, and the arrangement was so uncertain that at the time of discovery I did not suspect its nature. Apparently, but not certainly, connected with the heap was an equine skull, pronounced to be that of an ass after examination by the British Museum Natural History Department.

No. 186 (Area D), pl. lxviii. Young bovine remains 5 ins. beneath the surface. The photograph was taken before complete excavation. The bones were incomplete, with head, vertebrae, and one femur missing from among the larger parts. The bones are now at the Natural History Museum, South Kensington.

No. 199 (Area D). Bovine remains of an adult animal, 4 ins. beneath the surface. The pile was

capped by the frontal bone, upon which the horn-stumps only remained. The limb-bones were complete, and all parts of the body were accounted for except a scapula. The bones are now at the Natural History Museum.

No. 208 (Area E). Young bovine remains at 3 ins. beneath the surface, in good condition. The head was arranged on the top and faced north-west (45° W. of N.).

No. 210 (Area E). Lay partially over one edge of the Old Kingdom grave, no. 224, at 3 ins. beneath the surface. The bones were fragmentary, and there was no head, but the structure of the pile was undisturbed, and the base of it rested very nearly upon the coffin. A young bos.

No. 218 (Area E), pl. lxviii, 2. The bones, of a young bos, lay 6 ins. beneath the surface, and were capped by a fragmentary head from which the horns had disappeared; it faced 315° , as no. 208. Otherwise the stack was in good condition, and produced a nearly complete skeleton as well as the hoofs and fragments of hide; the astragali and several ribs, however, were missing.

No. 219 (Area E), pl. lxviii, 4. Young bovine remains, in good condition, capped by the frontal bone with a pair of spreading horns 15 ins. long. The head was oriented to 315° , as in the cases of nos. 218 and 208. The lower jaws were missing, as were the femora, sacrum, calcanea, astragali, vertebrae, and metapodia.

No. 219a (Area E), pl. lxviii, 3. Traces of pile only.

No. 220 (Area E), pl. lxviii, 5. A mature bos, about 9 ins. beneath the surface. The pile had subsided, but was still capped by the head, retaining the left horn 19 ins. long. It faced 300° , i.e. 60° west of north, but this deviation may be due to the natural disarrangement of the bones. There was only one mandibular ramus.

No. 221 (Area E), pl. lxviii, 3. A young bos, the top of the head had disappeared down to the level of the palate. Orientation 325° . Both lower jaws were intact. A femur was missing, but otherwise the bones were complete. A small cake, of what I believe to be bread, was included in this pile. Unfortunately it was lost on the journey home, so the exact composition of it is not known.

No. 222 (Area E), pl. lxix, 1. A young bos, with fragmentary indications of upper part of head and no horns, but with complete dentition. Orientation about 330° . The skeleton was complete.

No. 223 (*Area E-F*), pl. lxviii, 3. Group, showing pile before excavation of hut circle 249 beneath it; and pl. lxvi, 3, showing both. Bovine remains, about 5 ins. beneath the surface, and stacked over the wall of circle 249. The beast had no head and the bones were incomplete, lacking femora, and one tibia, among the long bones, and several smaller parts.

Comparative material of Egyptian ox bones is too scarce in this country to permit of exact determination of our animals. My collections of midden animal bones, including those from Fayum, are however being carefully kept together by Miss Bate, Natural History Museum, and form a nucleus for future investigations and additions.

26. DOG BURIAL

No. 206 (*Area E*), pl. lxi, 2. Another interesting discovery was a mass of bones of dog or jackal—at the time I could not determine which, and expert opinion has since decided dog—found massed beneath three large blocks of limestone within 6 ins. of the surface. As there were no similar boulders in the immediately adjacent deposits, it seems probable that these were intentionally placed here in relation to the canine remains beneath. The bones represent at least fifteen individuals, and lay distributed over an area of about four feet square. The marked feature of the accumulation was the range in age of the animals, starting from a fully mature beast, and descending through intermediate stages to the smallest of puppies. There is, therefore, no question of a bitch and her litter having been disposed of, and the heap represents a slaughter of more esoteric meaning. The skulls were not cracked, and I could detect nothing to indicate by what means the creatures had been killed. Among the remains were included mandibular rami of two cats, believed to be domesticated animals. There was no uniformity in orientation of the heads as in the case of the bovine skulls, and there can be no certainty in regard to their period. We know as yet nothing about dog burials in the Old Kingdom, but a continuation of Predynastic practice may be looked for, which would form another link in a chain of custom seen in one of its earliest manifestations at Naqada (*Naqada and Ballas*, p. 26, where a pit in Cemetery T, containing the remains of twenty dogs, was discovered), and shown at the other end of its run in the immense dogs' hypogeum at Abydos of Roman age, where tens of thousands of individuals

were buried (*Cemeteries of Abydos*, Part II, pp. 99-101, and *Cemeteries of Abydos*, Part I, pp. 40-8).

Our dog burial may be of any age, from Middle Predynastic, contemporary with the layer in which it occurred, to Old Kingdom, when its position would be intrusive. It will be remembered that bones of a cat were discovered by Professor Peet in the Late Predynastic settlement at Abydos (*Cemeteries of Abydos*, Part II, p. 7), and the presence of this animal in our remains does not therefore necessarily point towards the later date.

27. THE FISH PIT

No. 155 (*Area B2*). One further instance of collected bones occurred on the site which must be recorded: these were discovered in a circular hole 4 ft. in diameter, and at a depth of 3 ft. 7 ins.; in this the remains of at least twenty-three individuals of *Lates niloticus* were represented by the horny cranial sheaths; vertebrae and bones were present in proportionate quantities. Similar bones were found in fairly large quantities throughout all levels of the settlement. In this case there was no question but that the hole had been dug from a higher level, as we were clearing the 1-ft. layer when its presence became known to the sensitive touch of a Qufti *turyieh*, though at the moment we believed it to be the filling of another human grave.

This fish pit appears similar to the series assembled in a regular cemetery, which has been described by L. LOAT in *Gurob*, 1904. There was evidence suggesting that the Gurob examples dated to the sixteenth dynasty.

CHAPTER VII

THE INVENTORY

28. AREA AI. GENERAL OBSERVATIONS

A short summary of the main features of each area will be given as an introduction to the inventory of the contents of each. The position of a few objects is shown in vertical section (pl. lxiv), but the position of all serially numbered objects can be pretty accurately estimated by consulting their given position in plan, their depth (in column 1 of the inventory), and the area section, pl. lxiv.

Depth 5 ft. 6 ins. to 6 ft. Dark midden earth, showing two well-defined lines of horizontal hearth, (a) an upper one at 1 ft. 9 ins.—2 ft. beneath the surface, about 6 ins. thick and 28 ft. in length;

it was practically horizontal, but the surface slope brought it up to within 1 ft. 3 ins. of the surface at its south-east end. Breadth irregular, dying out in area A2. Consisted chiefly of dung fuel. *Date.* A decorated sherd (plan 1) lay well above it, and three white-cross-lined sherds (plan 2, 3, 12) not far beneath it. Pot burial no. 13 is later, being sunk through it. The hearth may be somewhere about S.D. 40-45. (b) A lower hearth at 3 ft. 6 ins.-4 ft., extending continuously across both length and breadth of the area; about 6-9 ins. thick, composed also of dung fuel. Pot burial no. 11 lay between the two and is older than the upper hearth, no break having been observed in its continuity. *Date.* It antedates the white-cross-lined sherds (plan 2, 3, 12). One combed sherd, plan 15, also lay over it, but others, plan 7, 8, 17, 21, lay beneath it, as also did the typical Badarian leaf-shaped arrow-head, plan 9. I should suspect the combed sherd, plan 15, is out of place, and that the hearth ranges about S.D. 30-35. The deposits beneath this hearth were pebbly and comparatively clean. The breccia floor dropped 1 ft. 6 ins. north-west-south-east—approximately the same angle as the present surface. The area was covered by a thin wash of clean limestone scree, about 8 ins. thick. As this was found in variable thickness over the surface of the entire site, its presence will not again be noted.

AREA A1. INVENTORY

Levels in heavy type indicate object was lying on breccia stratum.

An asterisk beside the plan number denotes that this object is shown also in sections, pl. lxiv.

Levels: the first foot has not been subdivided, as it included an irregular depth of surface scree.

Depth.	Object.	Plan No.	Remarks.
1'	Decorated sherd. Pl. lxx, 1.	1*	Pink-buff ground; plum-colour paint. Possibly Corpus D 5rk. S.D. 48-49. The design is skeuomorphic—probably rush-work banding.
1'	Single end scraper. Pl. lxxviii, 1.	—	Length 9 cm. on a concavo-convex flake. The upper-face shows three flat longitudinal flake-scars, worked off to a shallow convex scraping end. Marginal retouch extends one-third of the length up both edges from the butt. Plain bulbar under-face.
1'	Small bivalve shell.	—	Used as a malachite palette, the interior stained green.
1'	Pot burial of infant. Pl. lxxvii, 2.	13*	See Section 20.
1'	Single end and side scraper. Pl. lxxviii, 20.	—	Length 6.6 cm., made on a heavy triangular flake, with alternate lateral retouch, and a steep scraping end.
1'	Sickle-flint. Pl. lxxviii, 24.	—	Length 6.6 cm., obliquely trimmed ends. Friction polish on denticulated edge. The opposite edge is abraded on the under-face throughout half its length.
1' 6"	Tanged flake. Pl. lxxi, 68. Pl. lxxix, 39.	22*	Length 7 cm., made of smoke-grey chert. The flake is worked to a stout tang by alternate retouch. The point is broken and the lateral edges much abraded.
2'	Pot burial of infant. Pl. lxxvii, 1.	11*	See Section 20.
2'	Lump of red ochre.	23	—
2' 6"	Large log of wood.	14	<i>Acacia</i> sp.
3'	White-cross-lined sherd. Pl. lxxii, 110.	2*	The type is not figured in Corpus; the dot decoration is rare at other sites, but is not uncommon at Badari. Compare pl. xxxviii, 18d, 18n, 33k.
3'	White-cross-lined sherd. Pl. lxxii, 111.	3*	No parallel in Corpus. Part of a bowl rim with plant design.
3'	Three black-topped ware sherds.	4	—
3'	Small copper object.	5	Length 1.4 cm. tubular.
3'	Chipped flint celt. Pl. lxxii, 144. Pl. lxxxi, 96.	6*	Length 5.5 cm. Triangular form with thin pointed oval section. Compare with plan 306.
3'	Sickle-flint. Pl. lxxxii, 101.	—	Length 8.4 cm. Oblique and pointed ends. Intermittent blunting of back edge. (Ashmolean.)
3' 6"	Badarian combed sherd.	15*	Fine lustrous black rim, combed both sides.
3' 6"	White-cross-lined sherd. Pl. lxxiii, 145.	12*	No parallel in Corpus. Fragment of bowl rim, decorated with dots contained between lines in chevron. Compare pl. xxxviii, 18d, 18n, 33k.
3' 6"	Red polished sherd.	—	Plum-coloured, coarse ware.
4' 6"	Carinated core scraper. Pl. lxxxiii, 164.	—	—
5'	Two Badarian combed sherds. Pl. lxxiv, 222.	7*	These lay about 1' beneath the lower hearth. (1) Fine rim in black ware combed both sides. (2) Black fine ware, combed both sides. Do not belong.
5'	Four Badarian combed sherds. Pl. lxxiv, 223.	8*	The best is in very fine ware, grey with black interior, combed both sides.
5'	Leaf-shape arrow-head. Pl. lxxiv, 236. Pl. lxxxiii, 168.	9*	Length 4.2 cm., made on a thin pointed flake of translucent material; the upper-surface is delicately pressure-flaked, the under-surface is partially retouched only. Four specimens of similar type came from Badarian grave 5116; these are pointed at both ends, whereas ours has a squared base. Technique and material are, however, similar.

Depth.	Object.	Plan No.	Remarks.	Depth.	Object.	Plan No.	Remarks.
5'	Carinated core scraper. Pl. lxxxiii, 176.	—	—	1'	Hemispherical flint scraper.	—	Made on a split round pebble, diam. 3 cm. A dome of white crust remains, the edge only being retouched. See Section 20.
5'	Concave-base arrow-head. Pl. lxxxiv, 234. Pl. lxxxiii, 166a.	10*	Length 4.8 cm. The edges are serrated; the ends of both wings have been snapped off.	1' 6"	Pot burial of infant. Pl. lxxvii, 3.	27	
5'	Small trimmed blade. Pl. lxxxiii, 170.	—	Made on a flake of grey chert 5.2 cm. long, upper-face of flake-scars and flake-ridges retouched along lateral edges and curved tip. Plain bulbar under-face. Resembles plan 127 (F, 4') and plan 160 (A5, 4' 6"). (Ashmolean.)	2'	Fine flint knife. Pl. lxxix, 57. Pl. lxxi, 83.	24*	Fish-tail variety, length 7.5 cm., made in dark grey chert. The blade has been worked down, probably after breakage, to a tang. The "fish-tail" is of the shallow U-shape type. This is given in the Corpus as antedating the V type. Compare, however, with plan 216 (E, 2' 6").
5' 6"	Heavy circular core scraper. Pl. lxxxiv, 189.	—	Diameter about 6 × 7 cm. Roughly trimmed on upper-face. Edges show signs of wear. (Ashmolean.)	2'	Fragment of cord. Pl. lxx, 39.	25	Twisted strands of a fibrous grass. Illustration shows similar piece from top level.
6'	Badarian combed sherd. Pl. lxxv, 269.	17*	Red combed exterior; plain black interior; lying on breccia—i.e. at base of settlement.	2'	Flint blade. Pl. lxxix, 52.	—	Length 8.5 cm., but tip broken. Upper-face shows longitudinal flake-scars and a shouldered base. Under-face is an unworked flake-surface with bulb.
6'	Black-topped ware sherd. Pl. lxxv, 257.	18*	Rim of fine lustrous quality. Lying on breccia. Corpus type B21. s.d. 30-68.	2' 6"	Red polished sherd with pot-mark. Pl. lxxii, 89.	26	The mark recalls with differences the emblem on white-cross-lined pots such as Corpus C 43s.
6'	Mealing stone.	19	A flat oval slab of limestone about 20 × 13 × 9 cm., slightly hollowed on one face.	2' 6"	Two red polished sherds with potmarks. Pl. lxxii, 90.	26a	These belong to each other, but have no connexion with plan 26.
6'	Flint hammer stone. Pl. lxxv, 275.	20	These were subsequently found in abundance at all levels, and were not individually recorded.	2' 6"	Red polished sherd. Sickle-flint.	27a	Smoky surface. Possibly belongs to plan 316.
6'	Badarian combed sherd. Pl. lxxv, 266.	21*	Red combed exterior, plain black interior. Lying on breccia.	2' 6"		27b	Length 6.3 cm. Oblique ends. Friction polish on much worn denticulated edge.
6' 5"	Thin, disk-shaped flint implement. Pl. lxxxv, 204.	16	Diameter about 4 × 4.5 cm.; worked evenly over both faces. Lying on breccia.	3'	Borer on concavo-convex flake. Pl. lxxxi, 98.	27c	Existing length 7.2 cm., but the blade is snapped short. Four channelled parallel flake-scars mark the upper-face, worked off to a strong point. Under-face is unworked.

29. AREA A2. GENERAL OBSERVATIONS

Depth 5 ft. 6 ins. to 6 ft. 6 ins. Dark midden earth, showing a continuation of the lower hearth found in A1. The archaeological material supports the date suggested for this in area A1. Badarian sherds plan 27g, 27h, 27j, 27m, and a Badarian steep-ended scraper plan 27i, all lay beneath the hearth, between it and the breccia. The objects overlying it, however, give uncertain dating material, but include the fish-tail knife plan 24, a pot burial plan 27, and a wavy-handled sherd plan 27d, with a sequence date of 46-58; and a decorated sherd plan 28. All we can therefore say definitely is that the overlying material, such as it is, is Middle Predynastic.

AREA A2. INVENTORY

Depth.	Object.	Plan No.	Remarks.
1'	Flint borer. Pl. lxxviii, 27.	—	Length 6.5 cm. Made on a thick flake showing heavy marginal usage. Broken point.

Depth.	Object.	Plan No.	Remarks.	Depth.	Object.	Plan No.	Remarks.
5' 6"	Badarian combed sherd. Pl. lxxv, 238.	27j*	Fine black-topped ware, with brown body. Portion of a rim in four pieces: combed both sides. Lying on breccia.	1'	Small black polished vase. Pl. lxx, 22.	34*	Height about 4.5 cm. The nearest in Corpus is F88, s.d. 58-64.
6'	Disk-shaped core implement. Pl. lxxxiv, 193.	27k	Diam. about 5 cm.; trimmed over both faces; retains a small area of cortex. Lying on breccia.	1'	Fragment slate palette.	35	—
6'	Coarse black sherd.	27l	Incurved rim, probably a fragment of Badarian "village" ware. Lying on breccia.	1'	Sickle-flint.	36	Broken; existing length 8.4 cm. Sickle edge worn down to blade.
6'	Badarian combed sherd. Pl. lxxv, 260.	27n	Black-topped rim with grey body in fine ware. Combed both sides. Lying on breccia.	1'	Sickle-flint. Pl. lxxviii, 26.	37	Length 9 cm. Oblique and pointed ends. Friction polish on denticulated edge. Considerable abrasion on opposite under-edge.
6'	Badarian combed sherd. Pl. lxxv, 261.	27m*	Fine black-topped brown ware combed both faces. Lying on breccia.	1'	Circular scraper. Pl. lxxviii, 6.	38	Diam. about 4.8 cm. Formed on a split pebble retaining the cortex on the upper face. Steep retouch around three-fourths of the edge. Under-face a flat fractured surface with negative bulb.
6'	Badarian combed sherd. Pl. lxxv, 263.	—	Brown ware with black interior, both combed. Lying on breccia.	1'	Nodule of red ochre.	39	—
				1'	Pair of Nile mussel shells. Pl. lxx, 24.	40	Found lying one valve inside the other, but not belonging. One shell is nicked along the edge similar to examples from the Fayum middens.
				1'	Sickle flint. Pl. lxx, 45. Pl. lxxviii, 22.	41	Length 10.7 cm. on concavo-convex flake; oblique and pointed ends. Friction polish on teeth. The back edge is heavily battered.
				1'	Small knife.	41	Length 6.7 cm. Made on a narrow flake with central flake-ridge on upper face, the retouch confined to the curved tip and the base. The under-face is a plain flake-surface, the bulb removed by terminal trimming.
				1'	Spindle whorl. Pl. lxx, 25.	42	White limestone; hemispherical.
				1'	Pebble of green porphyry.	43	A large smooth oval pebble, derived from gravels of Red Sea Hills origin.
				1'	Bone awl. Pl. lxx, 29.	44	Made of the distal end of metacarpus of an antelope—perhaps a gazelle—larger than a Dorcas gazelle.
				1'	Pointed blade with a single shoulder. Pl. lxxviii, 14.	45	Made on a twisted flake 8.7 cm. long. Alternate retouch on the upper and under margins.
				1'	Single end scraper. Pl. lxxviii, 3.	46	Length 9 cm. Made on a thin, concavo-convex flake, with a central flake-ridge; the retouch is confined to the lateral edges, the convex scraping end, and the base. Under-face a plain flake-surface, the bulb having been removed in the course of fan-like retouch at the basal end.
				1'	Decorated sherd. Pl. lxx, 3.	47*	Red ground with three plum-colour rush bands. Probably Protodynastic. (Manchester.)
				1'	Small rough red vase. Pl. lxxvii, 15.	48	Corpus type R 60l. No sequence date.
				1'	Decorated sherd. Pl. lxx, 4.	62	Seven parallel rush bands. Type of Corpus D 10k. s.d. 46-63. (Manchester.)

30. AREA A3. GENERAL OBSERVATIONS

Depth 4 ft. 6 ins. to 6 ft. This area contained more objects than the preceding, including a great quantity of rough sherds. The lower hearth of Areas A1 and A2 persisted, but contracted in a northward direction diagonally to my line of section. The breccia level was very irregular, sloping up sharply between the 60 ft. and 70 ft. pegs. Against this slope the hearth was banked up in a thick black mass. Badarian sherds 65h, 65j, 65k, and 82a lay mixed in the ashes, whilst 65l, 82h, and 82i lay beneath it farther down the slope. One combed sherd, 65g, was, however, found above it. The base of the double pot burial no. 59 rested upon this hearth.

AREA A3. INVENTORY

Depth.	Object.	Plan No.	Remarks.
1'	Decorated sherd. Pl. lxx, 2.	28*	Fragment with rush-work bands. (Ashmolean.)
1'	Fragment slate palette.	29	(Manchester.)
1'	Pierced shell.	30	<i>Conus taeniatus</i> Hwas (juvenile). Habitat, Red Sea.
1'	Disk bead.	31	In grey limestone.
1'	Pierced shell. Pl. lxx, 21.	32	<i>Conus</i> sp. Habitat, Red Sea.
1'	Single end scraper on blade. Pl. lxxviii, 2.	33	Length 8.5 cm. The upper face shows longitudinal flake-scars and flake-ridges. It is thin-butted, but thickens considerably at the convex scraping end, which is steeply retouched. Secondary trimming extends two-thirds up one side from the end. Under-face is a plain bulbar surface.

Depth.	Object.	Plan No.	Remarks.	Depth.	Object.	Plan No.	Remarks.
1' 6"	Fine knife with unilateral tang. Pl. lxxi, 57. Pl. lxxix, 35.	50	Length 14 cm. Made in smoke-grey mottled chert. The blade has the twist characteristic of this class of knife. The upper-face shows two anticlinal flake-scars and a sharp flake-ridge. The left hand of these surfaces has been flaked all over, as has also the entire under-face. The upper surface to the right of the central keel is untrimmed. The cutting edge shows abrasion. The base is worked by the removal of two main flakes, and minor retouch, into a rectangular shoulder. Compare with plan 63 and 259.	2'	Single end scraper. Pl. lxxix, 48.	49	Made on a thick parallel-sided flake 6.8 cm. long. Steep marginal retouch at end and up one margin.
1' 6"	Fragments of slate palette.	51*	Fish shape, with suspension hole.	2'	Rough red pot containing thirteen flint flakes. Pl. lxxi, 85.	52*	The type ranges from s.d. 43 to 70. Of the flakes eight are unworked, two are ordinary sickle-flints 7.5 and 6.5 cm. long respectively; the remaining three are knives. (a) Flake 13 cm. long. The upper-face consists of two longitudinal flake-scars, separated by a low central ridge. The left side of this has been retouched all over as in plan 50, the right being left unworked. The under-face is a plain flake-surface, except for considerable marginal trimming, and thinning down of the curved tip. The butt is slightly tanged.
1' 6"	Black-topped ware sherd.	54	—				(b) A concavo-convex flake 10.8 cm. long, with marginal retouch and a narrow scraping end.
1' 6"	Spindle whorl. Pl. lxxi, 54.	55*	Limestone; broken, but originally hemispherical. (Manchester.)				(c) Concavo-convex flake 13 cm. long, probably unfinished, but showing signs of edge use.
1' 6"	Lump of red ochre.	56	(Ashmolean.)				Corpus type approx. P 22b. No s.d.
1' 6"	Two spindle whorls. Pl. lxxi, 62.	57	Limestone: (1) cylindrical; (2) hemispherical.	2'	Small saucer in polished red ware. Pl. lxxvii, 5.	53	
1' 6"	Limestone pebble amulet. Pl. lxxi, 60.	58	Oval pebble with brown crust. Length 5.5 cm. A slotted suspension hole has been countersunk horizontally through the face, leaving only a thin bridge of the outer pebble. An interesting technical achievement.	2'	Small flint knife. Pl. lxxi, 87. Pl. lxxix, 50.	65a	Length 7.7 cm. Upper-face formed of longitudinal flake-scars and two separating flake-ridges; delicately trimmed tip; unworked edges. Plain bulbar under-face.
8"-4'	Large double pot burial. Pl. lxix, 3, 4, 5.	59	See Section 20.	2' 6"	Single end scraper on long narrow blade. Pl. lxxx, 59.	65b	Length 11 cm. Made on a concavo-convex flake. The scraping end is roughly retouched. Slight nibbling at base; unilateral retouch on under-margin.
1' 6"	Concave base arrow-head. Pl. lxxi, 66. Pl. lxxix, 41.	60	In dark grey mottled chert with wide angle wings, one of which has been broken.	2' 6"	Sickle-flint.	65c	7.3 cm. long, with oblique ends. Friction polish on serrated edge.
1' 6"	Figurine of white crusted chert. Pl. lxxi, 59.	61	A natural pebble 10 cm. long. The resemblance in shape to the human form has been seized upon, and emphasized by scratched lines round neck, waist, and buttocks. The intention of two short parallel strokes on the shoulder is less apparent. Tattoo marks?	2' 6"	Spindle whorl. Pl. lxxii, 102.	65d	Grey limestone. Hemispherical type.
1' 6"	Flint knife. Pl. lxxi, 58. Pl. lxxix, 38.	63*	Length 16.2 cm. in pink-grey chert. Irregularly pressure-flaked over both faces. The edges much worn by use. A basal shoulder connects it with the type of plan 259, and heralds the well-known Protodynastic type with re-entrant handle.	2' 6"	Pierced shell.	65e	<i>Fusus polygonoides</i> Lam. Habitat, Red Sea.
1' 6"	Flint blade. Pl. lxxix, 34.	64	Length 9.2 cm. Made on a thin concavo-convex flake. Broken tip and abraded cutting edge. Plain under-face with constricted bulbar end.	3'	Flint blade. Pl. lxxx, 95.	65f	Length 11 cm., on a twisted concavo-convex flake; longitudinal flake-scars on upper-face, which is trimmed to a point; heavy retouch on both margins and a strip of white cortex as a grip. Plain under-face with the bulb removed.
1' 6"	(a) Mealing stone. (b) Breccia marble. Pl. lxxi, 65.	65	Flat oval limestone block 19 x 13 x 5 cm. One of two found. Belongs to a game of ninepins. See <i>Pre. Eg.</i> , p. 32. Compare with plan 167.	3' 6"	Badarian combed sherd. Pl. lxxii, 117.	65g*	Fine grey ware combed both faces.
				3' 6"	Badarian combed sherd. Pl. lxxiii, 156.	65h*	Grey ware, combed outside only. Plain black interior.
				3' 6"	Dark brown polished sherd.	65i	Rim.
				4'	Badarian combed sherd. Pl. lxxiii, 171.	65j*	Coarse quality, red exterior, plain black interior.

Depth.	Object.	Plan No.	Remarks.
4' 6"	Badarian combed sherd.	65k*	Rim of fine ware, combed both sides.
4' 6"	Badarian combed sherd. Pl. lxxiv, 198.	65l*	Part of keeled bowl in red ware with plain black interior.
6'	Red polished sherd.	65m	Coarse make, with black interior. Possibly Badarian.

31. AREA A4. GENERAL OBSERVATIONS

Depth 5 ft. to 6 ft. 6 ins. The same hearth at 3 ft. 6 ins.—4 ft. continued on up the slope into this area, and, as before, Badarian sherds were collected from beneath it (plan 82c, 82f, 82i, 115; whilst plan 110h, a broken flint blade, is of typical Badarian workmanship). A black-topped pot, plan 198, rested upon the hearth, which continued into area D; it resembles Corpus B 42b with a sequence date of 31–50, too long a range to help check our estimate of about S.D. 30–35 for the hearth. Hut circle no. 112 was laid in a hole cut apparently through the hearth. The biconical porphyry mace-head plan 100, lying on the line of section above the hearth, is discussed along with the other presumptive evidence for the age of the hut circles in Section 17, p. 83, with the conclusion that it is round about S.D. 38–45.

AREA A4. INVENTORY

Depth.	Object.	Plan No.	Remarks.
1'	Group of four round flint hammerstones.	66	No further individual records of these were kept.
1'	Small flint knife. Pl. lxxviii, 19.	67	Very thin oval flake 6 cm. long, slightly retouched round edges. Plain back with bulb.
1'	Sickle-flint.	68	Length 8.9 cm. with oblique and pointed ends. Friction polish on denticulation. The opposite edge is battered.
1'	Carinated core scraper. Pl. lxxviii, 29.	69	—
1'	Spindle whorl. Pl. lxx, 27.	70	Limestone. Small hemispherical type. (Ashmolean.)
1'	Circular scraper. Pl. lxxxviii, 13.	70a	Diam. 6.7 × 6.5 cm. Flat under-face of natural fractured flint. Plano-convex section. Upper-face retains a cap of crust, worked down steeply on three sides and at a low angle on the fourth.
1'	Pair of flat circular scrapers.	71	Diam. about 9 cm. Struck off the same core. The implements are unfinished, portions of the white cortex remaining on the edges, where, however, some marginal retouch has been completed.

Depth.	Object.	Plan No.	Remarks.
1'	Broad-bladed knife with re-curved cutting edge. Pl. lxxviii, 21.	72	Length 10.9 cm. Upper-face shows two main flake-scars; bold marginal retouch around top and along both edges. Rectangular butt covered with a strip of cortex. The under-face is a naturally fractured surface.
1'	A pair of wood stakes.	73	Tamarisk. One driven into the ground; existing length 1' 3"; the other lying prone, length 8".
1' 6"	Fine knife. Pl. lxxi, 56. Pl. lxxix, 37.	74	Length 13.6 cm. in honey-coloured chert. Process of manufacture similar to plan 50, but without the tanged handle, and with a plain flake under-face, from which the bulb has been removed.
1' 8"	Small knife. Pl. lxxi, 88. Pl. lxxix, 56.	75a	Length 6.8 cm. Curved blade on very thin flake. Retouch confined to the edge, tip, and butt. Plain under-surface with bulb.
1' 6"	Single end scraper on blade. Pl. lxxix, 30.	75b	Length 9.5 cm. in chocolate-colour chert. Upper-face shows four flat flake-scars. Faceted butt. Good marginal retouch. Under-face unworked except for uni-lateral thinning flakes. Fractured bulbar area.
2'	Single end and side scraper. Pl. lxxix, 47.	—	Length 6.4 cm. Made on a heavy flake with plano-convex section. Alternate marginal retouch. Resembles that figured pl. lxxviii, 20.
2' 6"	Small scraper.	—	On flake 4 cm. long. Good edge trimming. Rectangular butt of cortex. Bulbar under-face with <i>écaillures</i> . (Ashmolean.)
3'	Two red polished sherds. Pl. lxxii, 118.	77	With potmarks. The fragments do not fit, but belong to the same vase.
3'	Knotted strand of plaited grass. Pl. lxx, 39.	78	Similar to specimen at 1' figured pl. lxx, 39.
3'	Bone awl. Pl. lxxii, 124.	79	Length 7.4 cm.
3' 6"	Malachite nodule. Black-topped sherd. Pl. lxxiii, 149.	80 76*	— Rim. Probably of Corpus type B 21–25.
3' 6"	Spindle whorl. Pl. lxxiii, 166.	81	Limestone. Cylindrical.
3' 6"	Triangular trimmed flake. Pl. lxxx, 121.	82	Length 5.4 cm. Heavy marginal retouch. Plain flake under-face with truncated bulb. (Manchester.)
4'	Decorated sherd. Pl. lxxiii, 168.	—	Rim, with decorated rectangular lip, and shoulder with spiral design. The same type as Plan 147, but a different vase. The sherd was found by a basket-boy, and while I have no reason to doubt it comes from this level, it appears to be beneath its probable horizon.

Depth.	Object.	Plan No.	Remarks.
4'	Small scraper. Pl. lxxxii, 124.	—	Length 4 cm. Retouch around edges. Rectangular butt, cortex covered. Under-face with bulb and <i>écaillage</i> . (Ashmolean.)
4'	Oval trimmed flake. Pl. lxxxii, 125. Pl. lxxxiii, 184.	—	Length 5.2 cm. A patch of orange cortex on upper-face; one margin carefully retouched. Flake under-face with bulb and <i>écaillage</i> . (Ashmolean.)
4'	Badarian combed sherd. Pl. lxxxiii, 179.	82a*	Coarse ware combed on outer side only. Plain black interior.
4'	Single end scraper. Pl. lxxxii, 126.	82b	Length 3.2 cm. Made on a thin rectangular flake with steep end trimming. Unworked bulbar surface.
5'	Badarian combed sherd. Pl. lxxxiv, 226.	82c*	Keeled red ware, with black interior, combed both sides, an unusual feature in this class.
5'	Coarse red sherd.	82d	Badarian "finger-tip" ware, characteristic of their heavy utility pots. Lying on breccia.
5'	Carinated scraper. Pl. lxxxiii, 177.	82e	On a thick flake, with scraping foot. Bulbar under-face. Lying on breccia.
5' 6"	Badarian combed sherd. Pl. lxxv, 253.	82f*	Coarse red ware; plain black interior; rivet-hole. Lying on breccia.
5' 6"	Badarian combed sherd. Pl. lxxv, 242.	—	Red ware with plain black interior.
5' 6"	Carinated core scraper. Pl. lxxxiv, 186.	82g	With a pronounced spur.
5' 6"	Badarian combed sherd.	—	Red, with plain black interior.
6'	Badarian combed sherd. Pl. lxxv, 262.	82h*	Red, with plain black interior.
6'	Badarian combed sherd. Pl. lxxv, 264.	82i*	Part of keeled bowl, in coarse red ware with plain black interior. Lying on breccia.
6' 4"	Single end scraper. Pl. lxxxv, 203.	82j	Made on concavo-convex flake 5.4 cm. long. Rough specimen, but good end trimming. Lying on breccia.
6'	Single end scraper. Pl. lxxxiv, 192.	—	Concavo-convex flake 6.4 cm. long with retouch at end only. Plain bulbar under-surface. Lying on breccia.
6'	Bifacial core implement. Pl. lxxxiv, 197.	82k	A heavy ovate, 8 × 6 cm., very roughly flaked.
6'	Boring tool. Pl. lxxxiv, 194.	—	A sub-triangular flake, trimmed to a stout borer. Length about 5.3 cm. Closely resembles plan 257 at 6 ft. 6 ins.

32. AREA A5. GENERAL OBSERVATIONS

Depth 4 ft. 6 ins. to 6 ft. 6 ins. This area was free from any definite line of hearth, with the exception of a small patch about 4 ft. in diameter at 2 ft. from the surface. The top 1 ft. of deposit produced eight decorated sherds, whilst traces of a beaten

mud floor (no. 101) may belong to the same period. Badarian sherds were confined to the lowest level.

AREA A5. INVENTORY

Depth.	Object.	Plan No.	Remarks.
1'	Decorated sherd. Pl. lxx, 5.	83*	Decoration shows the body, legs, and tips of curved horns of a goat. An udder appears to be indicated, which renders it improbable the beast is the ibex so usually represented; it is also distinguished from these by the rendering of the legs—straight instead of bent. Compare with Corpus D 78f, undated.
1'	Decorated sherd. Pl. lxx, 6.	84*	Pink ware with matt plum-colour paint. Shows two human figures clasping hands. Round heads with no features, and triangular bodies. The human figure-vases are late in the Middle Predynastic sequence.
1'	Decorated sherd. Pl. lxx, 7.	85*	Fragment of buff ware with Indian red spots. This decoration is given in Corpus as ranging between s.d. 48-60.
1'	Clay doll. Pl. lxx, 36.	86	Length 6.5 cm. Roughly made, the face being indicated by two impressions. Breasts as in <i>Prehistoric Egypt</i> , pl. iii, nos. 4, 5.
1'	Spindle whorl. Pl. lxx, 28.	87	Limestone; hemispherical.
1'	Fragment slate palette. Pl. lxx, 33.	88*	Fish shape, with head and fins clearly cut. The palette is broken and portion of body missing, which makes Corpus type uncertain. The dorsal fins are, however, more sharply denticulated than is usual.
1'	Decorated sherd. Pl. lxx, 8.	89*	(Ashmolean.)
1'	Decorated sherd.	90*	Series of parallel lines in Indian red. Probably oars; the ship-figured vases begin about s.d. 45 and continue till about 63.
1'	Decorated sherd.	91*	Too small for determination.
1'	(a) Circular scraper. Pl. lxxviii, 16.	92	Diam. 5 × 3 cm. Made on a nodule of tabular flint. The crust remains around half its periphery. Steep convex scraping edge.
1'	(b) Sickie-flint. Pl. lxx, 44. Pl. lxxviii, 23.		Length 10.2 cm., oblique and pointed ends. Well denticulated edge with friction polish. Battered back.
1'	Decorated sherd.	93*	Grey-buff ground, plum-colour paint. Pattern belongs to the class of vases Corpus D 26b. (Manchester.)
1'	Fragment of rough pot. Pl. lxx, 34.	94	Half rim and part of shoulder rough red ware. Approximately Corpus R 66b, undated.
1'	Decorated sherd.	95*	Buff ground, and rush-band decoration in purple-red, arranged in right-angle groups. Probably like Corpus D 5p. No date.

Depth.	Object.	Plan No.	Remarks.	Depth.	Object.	Plan No.	Remarks.
1' 6"	Minute clay vase.	—	Height 3.3 cm. Mouth diam. 4.2 cm. Decorated with band of tiny punctures.	3'	Carved ivory hair-pin. Pl. lxxii, 127.	108	Bird-ornamented top. Given in Corpus as covering entire range of Predynastic period. The shaft is adorned with two bands of incised cross-lines. Capart figures a similar type in <i>L'Art primitif en Egypte</i> , p. 79, no. 3.
1' 6"	Sickle-flint. Pl. lxxi, 67.	—	Length 6.2 cm. Well-worn serration and heavy battering on opposite edge. Rectangular ends.	3'	Two bowls. Pl. lxxvii, 8. Pl. lxxvii, 7.	109*	Lying one inside the other. (1) Rough red, shallow. (2) Porous buff with incurved rim.
2' 10"	Burial of iii-ivth dyns.	98	See Section 21, p. 90.	3'	Remains of wattle and daub.	111	Lying loose in the earth. No trace of structure.
2'-3'	Floor of beaten mud.	101	About 3 sq. ft. with an irregular surface sloping north-south. No trace of hut circle, and the floor may possibly have been a threshing-floor.	—	Hut circle. Pl. lxvi, 4.	112	See Section 17, p. 83.
3'	Elongated oval scraper. Pl. lxxii, 142. Pl. lxxxi, 89.	99	Length 7.5 cm. An interesting piece made on a fragment of a broken ground and ripple-flaked knife characteristic of the Middle Predynastic period. The under-face is formed of the ground surface. The upper-face shows seven parallel ripple flakes, transverse to the length, and truncated by the later edge trimming which extends all round the margins.	3' 6"	Red polished sherd.	—	Thick ware with dull red interior.
3'	Mace-head in porphyry. Pl. lxxii, 143.	100*	Grey-green rock with white crystals. Broken through perforation; existing length 5.5 cm. The hole was drilled from one side only, and broke the stone in half just before completion of the operation. The mace belongs to the hitherto undated biconical type with bluntly pointed hammer ends.	3' 6"	Sherd with incised herringbone decoration. Pl. lxxiii, 147.	110*	Coarse grey pottery. Other fragments of a similar kind, but not apparently of the same pot, were found (plan 270d, 346, and in hut circle 248). The sherd, whilst recalling the Pan-grave technique, has marked differences in firing and composition. A sherd of like character is figured by de Morgan, <i>Recherches sur les Origines de l'Egypte</i> , p. 161, from the prehistoric settlement at Toukh, but no stratum evidence is given.
3'	Pierced marine shell.	102	<i>Vertagus asper</i> (Linné) var. Habitat, Red Sea and Indian Ocean.	4'	Ovate scraper.	—	Made on a concavo-convex flake, 6.2 cm. long. A rough and much abraded specimen, with cortex butt and bulbar under-surface. (Ashmolean.)
3'	Four fragments of three wavy-handled pots. Pl. lxxii, 115.	103	The pots which lay together had been crushed into pieces. They belong to a type ranging between s.d. 46-58. One pot contained wood shavings identified as <i>Cupressus</i> sp. or <i>Juniperus</i> sp. Their position was perilously near the O.K. burial no. 98 and they are included with reserve.	4'	Carinated core scraper. Pl. lxxxii, 144.	—	Length 5 cm., with curved blade and constricted base, retouched on edge only. Plain bulbar under-face.
3'	Fine circular scraper. Pl. lxxx, 73.	104	Diam. about 7 cm. Calcareous white crust over upper-face, trimmed away symmetrically around the edge. Under-face flat and unworked. Large concave fracture at bulb end.	4'	Small trimmed flake.	—	Part of rim in fine black ware, combed both sides.
3'	Copper wire pin. Pl. lxxii, 123.	105	Existing length 4.5 cm.; broken.	4'	Badarian combed sherd.	110a*	Length 6.4 cm. on a thin flake. The upper-face shows two anticlinal flake-scars and central flake-ridge. Finely worked curved tip, with delicate marginal blunting up the back edge. Cutting edge slightly abraded. Carefully retouched convex butt. Plain flake under-surface with "plunge" near the butt. The bulb was removed by the trimming of the tip.
3'	Ivory or bone comb. Pl. lxxii, 130.	106*	Corpus type no. 8. The short-toothed comb is essentially a Middle Predynastic type, ranging from s.d. 40 to 70. In our specimen seven teeth only remain. The opposite end is furnished with minutely wrought teeth, and each lateral margin has a cut.	4' 6"	Sickle-flint. Pl. lxxxiii, 166. Pl. lxxiv, 213.	110c	Fragment, broken each end. The only specimen from this level.
3'	Spindle whorl.	107	Limestone; hemispherical.	4' 6"	Small trimmed curved blade. Pl. lxxxiii, 160.	—	Length 5.2 cm. on flake. Trimmed tip and back edge. Plain under-face with bulb. Resembles pl. lxxxii, 127, and pl. lxxxiii, 170.
				4' 6"	Rough core scraper.	—	—

Depth.	Object.	Plan No.	Remarks.
5'	Badarian combed sherd.	110d	Fine rim of black ware, combed both sides. Lying on breccia.
5'	Badarian combed sherd.	110e*	Red ware with plain black interior. Lying on breccia.
5'	Badarian combed sherd.	110f	Rim of fine black-topped ware with brown body. Combining on both sides. Lying on breccia.
5'	Badarian combed sherd.	110g*	Brown exterior, black interior, combed on both sides. Lying on breccia.
5'	Fragment of knife blade. Pl. lxxxiii, 171.	110h*	Broken. Pressure-flaked over both faces in Badarian fashion. Lying on breccia.
5'	Badarian combed sherd. Pl. lxxiv, 231.	110i	Brown exterior. Black interior, with impressed lattice design. (Manchester, no. 7665.)
5' 6"	Two fragments Badarian combed ware. Pl. lxxv, 243. Pl. lxxv, 241.	115	(a) Coarse black, combed outside only. (b) Brown sherd, combed outside only. Black interior. Lying on breccia.
5' 6"	Badarian combed sherd. Pl. lxxv, 240.	115a*	With two rivet-holes; combed outside only. Coarse red ware with black interior. Lying on breccia.
5' 6"	Badarian combed sherd. Pl. lxxv, 239.	115b*	Brown keeled pot with faint combing only. Plain black interior with impressed triangular pattern. Lying on breccia.
5' 6"	Rough brown sherd. Pl. lxxv, 249.	115c	With <i>pointillé</i> decoration.
5' 6"	Single end and side scraper. Pl. lxxxiv, 181.	114a	Length 5.6 cm.; formed on a concavo-convex flake.
6'	Fragment of worked fossil wood. Pl. lxxv, 276.	114	Length 9 cm.; thickness about 4 cm. Polished and bevelled on one face, rough on sides and back, showing the structure of the silicified wood. Lying on breccia.
6'	Heavy bifacial core implement. Pl. lxxxiv, 198.	—	Lying on breccia.
6' 2"	Fragment black polished sherd with potmark. Pl. lxxv, 258.	113	Part of a thick rim. The mark is a grid pattern.
6' 4"	Two rough red sherds. Pl. lxxv, 272.	96*	The ware bears finger-tip impressions on outer surface; the straight rim, about 0.8 cm. thick, is coarsely milled. The same decoration was found on a pot in a Badarian grave. Lying on breccia.
6' 4"	Rough red sherd. Pl. lxxv, 271.	97	Curved rim and part of shoulder with incised diagonal lines. Lying on breccia.

33. AREA A6. GENERAL OBSERVATIONS

Depth 3 ft. to 4 ft. 6 ins. The shallowness of this area and the comparative cleanness of the ground showed that it was on the fringe of the habitation area, and in any case it was not used during Badarian or Early Predynastic times. The objects from it are not earlier than s.d. 40, with the possible excep-

tion of the hippopotamus amulet plan 130. These amulets have never been satisfactorily sequence dated. A thin seam of hearth at about 1 ft. 6 ins. to 2 ft. from the surface appeared on the north-west end of the area, connected with decorated sherds. The line of section is given under "F" 5 ft. higher up the slope, worked the second season. No objects were found at the lowest level.

AREA A6. INVENTORY

Depth.	Object.	Plan No.	Remarks.
1'	Plum-red polished sherd.	116	—
1'	Cist burial. Pl. lxxvi, 1, 2, 3.	117	See Section 20, p. 89.
1'	Decorated sherd.	118*	Buff ground, plum-colour spots. Same type as plan 85, but coarser texture and paint shade different.
1'	Decorated sherd.	119*	Rush lines. (Ashmolean.)
1'	Fine circular scraper. Pl. lxxviii, 11. Pl. lxx, 42.	119a	Made on a thin flake 8.4 cm. long. Flat upper-face of two main flake-scars, and a strip of white cortex near edge. Rectangular, faceted butt. Retouch confined to edges. Plain bulbar under-face with <i>écaillage</i> and ripple marks.
1'	Decorated sherd.	126*	Rush bands. (Ashmolean.)
1' 6"	Fragment slate palette.	—	—
2'	Wavy - handled sherd.	120*	Well-developed ledge handle, probably between s.d. 46 and 58.
2'	Decorated sherd. Pl. lxxi, 69.	121	Buff-green ware with head of flamingo, as Corpus D 51k, s.d. 48-49. The curve of the back of a second bird is seen. Possibly the same pot as plan 308.
2'	Decorated sherd. Pl. lxxi, 70.	122	Buff-green ware with purple paint. Oars, as in no. 179, but a different pot. (Ashmolean.)
2'	Fragment of worked bone. Pl. lxxi, 78.	123*	Length 5.5 cm. Nicked along the edge after the manner of plan 40.
2'	Decorated sherd.	123	Rush lines. (Manchester.)
2'	Decorated sherd. Pl. lxxi, 71.	124*	Pink ground, plum-colour paint. The design at first suggests oars, but the line of the hull in that case is not sufficiently concave.
2'	Model clay boat. Pl. lxxi, 79.	125	Half only, with upturned prow. Existing length 4.5 cm.
2'	Decorated sherd. Pl. lxxi, 76.	125a	Rush bands. Possibly belongs to plan 159.
2' 6"	Small carinated core. Pl. lxxx, 67.	—	Height about 2.7 cm.
3'	Patch of uncarbonized wheat husks. Pl. lxxii, 136.	127*	Emmer. (Dr. Percival's identification.) This and the few grains found on the floor of hut circle 248 were the only finds of cereals on the site.
3'	Malachite nodule.	128	—
3'	Small red polished pot. Pl. lxxvii, 9.	129	The type is essentially Middle Predynastic, but variations are too numerous for a more exact s.d. to be attributed.

Depth.	Object.	Plan No.	Remarks.
3'	Ovate double end and side scraper. Pl. lxxx, 74.	129a	Concave flake 7.3 cm. long. Upper-face formed of white calcareous crust, trimmed away by marginal retouch. One broad scraping end with steep chipping; the narrower opposite end is worked down more gradually; this is a feature in many double scrapers of this site (plan 317, 321, 322, for example). Plain bulbar under-surface, the bulb having been removed in edge trimming.
3'	Bone needle. Pl. lxxii, 129.	129b	Existing length 6.7 cm., broken through the eye-hole. Flat section.
3'	Small circular object in pink breccia. Pl. lxxx, 86.	129c	Diam. 2.5 cm. Flat under-face; the upper-face is bevelled. Stopper?
4'	Hippopotamus amulet. Pl. lxxiii, 176.	130*	Pink limestone. The s.d. of these amulets is uncertain. Our specimen has no perforation, but has a dorsal tag. A short tail is indicated by an incised line in the back section.

Depth.	Object.	Plan No.	Remarks.
2' 8"	Extended burial.	136	See Section 22, p. 91.
1'	Carved ivory pin. Pl. lxx, 30.	137	The same article is given in Corpus as a gaming piece, see p. 32 and pl. xxxi, where nos. 1 and 2 resemble our specimen and are adorned with a similar design of four groups of alternating diagonal lines.
1'	Group of four implements. Pl. lxxviii, 8. Pl. lxx, 43.	138	(a) Knife, length 11 cm., made on a heavy flake of chocolate-colour chert with a slight twist in the blade. The upper-face is formed of two anticlinal flake-scars with a sharp flake-ridge. One of these surfaces has been left without retouch, except for symmetrical marginal thinning flakes on the under side. This forms the cutting edge. The other upper half has been flaked all over, and acts as a <i>dos rabattu</i> . The under-face is unworked except for thinning flakes at the edge and one end. The bulb is removed. The knife belongs to the order of plan 50, 74, and 152 from 1' 6" level. (b) Oval scraper, on a thin flake, of the same material as the preceding. Length 6.5 cm. Upper-surface is formed of one large main flake-scar worked all round to a scraping edge. Under-face a plain flake-surface with <i>écaillage</i> and ripple marks. (c) Fine point, 5.6 cm. long, probably an arrow-head, made of the same chocolate-colour chert. Upper-face shows two longitudinal flake-scars worked off to a fine point, and with lateral retouch. A truncated butt, slightly shouldered for hafting. Plain bulbar under-face with no bulb. (d) Trimmed flake 7.5 cm. long, made on a pinker chert than the others in this group. The upper-face bears the usual flake-scars and flake-ridges. Heavy marginal wear on the under-surface.
	Pl. lxxviii, 7.		
	Pl. lxxviii, 9.		
	Pl. lxxviii, 10.		
1'	Decorated sherd.	139	(Ashmolean.)
1'	Thin bone disk.	140	Diam. 1.6 cm., with a central perforation obtained by rotatory grinding of the back.
1'	Decorated sherd.	141	Buff ware; three plum-colour spots. (Ashmolean.)
1'	Malachite nodule.	142	—
1'	Decorated sherd.	143	(Manchester.)
1'	Breccia marble. Pl. lxx, 37.	144	Similar to plan 65.
1'	Decorated sherd.	145	Red ground, matt plum-colour paint. Pattern uncertain. It might be part of a scorpion similar to D 87, though that is embossed decoration.

34. AREA BI. GENERAL OBSERVATIONS

Depth. The deposits here were shallow, not exceeding 2 ft. 6 ins. As the area was consequently of little use for my purpose, we stripped the upper 12 ins. only. None of the material from it is earlier than the decorated pottery period. Sherds from the danger-zone of the intrusive graves were not kept. Owing to restriction of plate space, areas Br-4 are shown in plan (pl. lxiii) nearer to area A than was actually the case. The true relative position is shown on key plan pl. lxii.

AREA BI. INVENTORY

Depth.	Object.	Plan No.	Remarks.
1'	Decorated sherd.	131	Eight oars. (Ashmolean.)
1'	Double end scraper. Pl. lxxviii, 4.	132	On a blade 10.0 cm. long. The upper-face shows longitudinal flake-scars and a sharp central flake-ridge. The main scraping end is worked off by fan-wise strokes. The opposite end is trimmed into a somewhat undercut scraper, due to flake-plunge. Under-surface a plain fracture face with bulb removed by end trimming.
1'	Perforated pottery disk. Pl. lxx, 35.	—	In rough-faced ware.
1' 8"	Extended burial.	133	See Section 21, p. 90.
1'	Decorated sherd.	134	Eleven oars. (Ashmolean.)
1'	Copper wire pin.	135	About 8.5 cm. long, but bent.

Depth.	Object.	Plan No.	Remarks.
1'	Minute mud vase. Pl. lxxvii, 17.	146	Height about 4.5 cm. The neck has a band of punctuations.
1'	Decorated sherd. Pl. lxx, 9.	147	Fragment of rim with spiral decoration, and painted zig-zags on the rectangular lip. Probably a small suspension vase as Corpus D 67d.
1'	Small spindle whorl. Pl. lxx, 26.	148	Limestone, discoid.

Area abandoned.

35. AREA B2. GENERAL OBSERVATIONS

Depth about 2 ft. 6 ins. to 3 ft. 6 ins., but uncertain as much loose limestone rubble, practically, but not entirely, devoid of sherds, formed the base of the deposits. The material from this area is all apparently Middle Predynastic. Two dynastic burials were found.

AREA B2. INVENTORY

Depth.	Object.	Plan No.	Remarks.
—	Extended burial.	149	See Section 22, p. 91.
1'	Decorated sherd. Pl. lxx, 10.	150	Fragment with spiral design; might belong to plan 147, but the paint is a slightly different shade.
1'	Decorated sherd. Pl. lxx, 11.	151	Four parallel rush lines.
1' 6"	Fine knife. Pl. lxxix, 36.	152	Length 10.4 cm. Made in smoky chert with slight twist in the blade. Upper-face formed of two steeply pitched anticlinal flake-scars and a sharp flake-ridge. As in plan 50, the left of these scars is pressure-flaked, whilst the right-hand side is without secondary trimming; it shows, however, heavy usage on the under-side.
1' 6"	Single end and side scraper on blade. Pl. lxxix, 31.	153	Length 9.4 cm. Made on a heavy flake of pink chert, concavo-convex. The upper-face is sharply flake-ridged with cortex remaining on one side. Plain under-face, with bulb removed by thinning retouch at the butt.
1' 6"	Sickle-flint. Pl. lxxix, 43.	154	Length 7.4 cm. Ends trimmed rectangulary. Friction polish on serrated edge; heavily battered on opposite edge.
2'	Two decorated sherds. Pl. lxxi, 73.	157	(a) Buff ground, Indian red paint. Spiral design. The sherd is considerably glazed. A wavy line just visible on fractured edge shows the design to be similar to Corpus D 67d. s.d. 63-64 and 52-58. (b) Four parallel rush lines.

Depth.	Object.	Plan No.	Remarks.
2'	Knots of twisted stems.	158	<i>Astericus graveolens</i> ; a common plant in the Wadis of the Arabian and Libyan deserts, as far south as Keneh.
2'	Decorated sherd. Pl. lxxi, 72.	159	Out-curved and under-cut rim and shoulder with wavy lines in Indian red on pink pottery. Uncertain type. Plan 308 may belong.
2'	Single end scraper. Pl. lxxix, 54.	—	On concavo-convex flake 8.2 cm. long. Careful end trimming. Upper-face retains a strip of cortex. Slight abrasion on one lateral edge. Nibbling retouch near base.
2' 6"	Extended burial. Remains of reed-impressed mud. Pl. lxxii, 101.	156	See Section 22, p. 91.
2' 6"	Small circular scraper. Pl. lxxxii, 111.	160	—
3' 6"	Pit containing a quantity of fish bones.	155	Diam. 2.5 cm. Steep marginal retouch. Plain flake under-surface.

Area abandoned.

36. AREA B3. GENERAL OBSERVATIONS

This area too, containing five burials, four certainly Dynastic, was valueless, and the area was abandoned.

AREA B3. INVENTORY

Depth.	Object.	Plan No.	Remarks.
6"	Extended burial.	161	See Section 21, p. 90.
1' 6"	Fragments of reeds. Pl. lxx, 50.	162	Bound together—the stems laid in parallel bundles.
1'	Coffin burial.	163	See Section 21, p. 90.
1'	Rough red pot. Pl. lxxvii, 10.	164	The nearest is Corpus R 96d. s.d. 47-63.
1'	Decorated sherd.	165	Part of shoulder with discoloured rush line decoration.
1'	Rectangular pottery object. Pl. lxx, 49.	167	Made in rough brown ware full of <i>tibn</i> . I am unable to suggest its purpose, unless it be a square arch used in the ninepins game; see <i>Naqada and Ballas</i> , pl. vii. In support of this suggestion we have the two marbles from this settlement.
1'	Decorated sherd. Pl. lxx, 12.	167a	Pink-buff ware, plum-colour paint. Design shows the apex of a pyramidal hill; possibly Corpus D 57. s.d. 47.
1'	Rough red pot. Pl. lxxvii, 11.	168	Type Corpus R 62c. No s.d.
2' 6"	Extended burial.	171	See Section 22, p. 91.
3'	Extended burial.	169	See Section 22, p. 91.
3'	Marine shell.	—	<i>Natica mamilla</i> L. Red Sea, etc.
3'	Pierced marine shell.	—	<i>Conus</i> sp.

Area abandoned.

37. AREA B4. GENERAL OBSERVATIONS

The deposits were too shallow to be of value stratigraphically and the area was abandoned at 2 ft. 6 ins.

AREA B4. INVENTORY

Depth.	Object.	Plan No.	Remarks.
1'	Small flint knife. Pl. lxx, 48. Pl. lxxviii, 18.	172	Length 9.5 cm., on a slightly twisted flake. Upper-face shows two low-pitched anticlinal flake-scars and a sharp flake-ridge. Retouched at tip. The under-face shows thinning at tip and one edge; bulb removed.
1'	Stack of animal bones.	173	See Section 25, p. 93.
1'	Decorated sherd. Pl. lxx, 13.	174	Half of a rim of buff ware, with a diam. of about 4 cm., shoulder decorated with irregular plum-colour spots as Corpus D 16t. s.d. 46-53.
1'	Two decorated pottery vase legs? Pl. lxx, 14.	175	These might belong to a theriomorphic vase, the legs being those of a bird. Compare de Morgan, <i>op. cit.</i> , p. 160, from <i>Gebel el Tarif</i> .
1'	Small trimmed blade. Pl. lxxviii, 17.	176	Length 6 cm. Upper-face formed of three longitudinal flake-scars with low flake-ridges. Secondary work is confined to the oblique tip, with "nibbling" retouch along both lateral edges. Plain under-face, with slight thinning retouch at the tip and butt. The bulb is removed.
1'	Decorated sherd. Pl. lxx, 20.	177	Row of "S" figures, which commonly occur on the ship-design vases, as Corpus D 43k. The explanation of the emblems as a flight of birds seems adequate.
1'	Decorated sherd.	178	Well-moulded outcurved lip. Design is obscure, but may be similar to D 2k, where the lip is different.
1'	Decorated sherd. Pl. lxx, 15.	179	Pink pottery, with plum-colour paint. The design shows a row of 12 oars.
1'	Ovate double end and side scraper. Pl. lxxviii, 12.	180	Made on a concavo-convex flake 6 cm. long, in dark grey chert. One margin is heavily flaked, the other battered. Plain under-surface with bulb removed.
1'	Coffin burial.	189	See Section 21, p. 90.
2' 6"	Two pots. Pl. lxxvii, 12. Pl. lxxvii, 13.	188	(a) Red polished with a black-fired patch on the side. Potmark on the base. Corpus type P 40e. s.d. 42-70. (b) Squat pot in buff ware. Corpus type Late 53k. s.d. 78-80. A small form is figured 53r. s.d. 58.

Area abandoned.

38. AREA D. GENERAL OBSERVATIONS

Depth 4 ft. to 4 ft. 6 ins. The area must be considered as a lateral continuation of A4; the hearth at 3 ft. 6 ins. to 4 ft. was picked up again, for a short distance, but petered out at the 54-ft. peg in a north-west direction, and the ground became clean limestone dust, pebbles, and sand. Into this three dynastic coffins had been placed. The most interesting object is a black-topped pot, already noted, plan 198, resting upon the hearth; it resembles a type dated 31-50 in the Corpus. With this possible exception no Early Predynastic or Badarian objects came from this area; and it is clear that the earlier folk sought such protection as the 3-ft. drop at the south-east end afforded for their open-air hearth. Two sections are given for this area, D1 and D2.

AREA D. INVENTORY

Depth.	Object.	Plan No.	Remarks.
1'	Coffin burial	181	See Section 21, p. 90.
1'	Pear-shaped mace-head. Pl. lxx, 40.	182*	White limestone; depth through perforation 6.2 cm. A typically Middle Predynastic type.
1'	Single end scraper. Pl. lxxviii, 5.	183	On a thin blade, 9.4 cm. long, tapering to the bulb end. The flake is concavo-convex, and shows two main anticlinal flake-scars and a central flake-ridge which has been reduced by a longitudinal blow. Perpendicular end trimming; no lateral retouch. Plain bulbar under-face.
1'	Single end and side scraper. Pl. lxxviii, 15.	183b	On a plano-concave flake 8 cm. long. Very fine, parallel, fluting retouch, worked diagonally, forms the scraping end. Both side edges are lightly trimmed. Plain under-face with bulb partially removed.
1'	Perforated marine shell.	183c	<i>Natica</i> sp.
1' 6"	Decorated sherd. Pl. lxxi, 51.	184*	Diagonal bands, contained within parallel lines. Type obscure.
1' 6"	Fragment of slate palette.	—	—
1' 6"	Fragment of slate palette.	185	(Ashmolean.)
1' 6"	Stack of animal bones.	186	See Section 25, p. 93.
1' 6"	Pl. lxxviii, 1.	—	—
1' 6"	Nodule of red ochre.	187	—
2'	Stack of animal bones.	199	See Section 25, p. 93.
2' 6"	Ivory pin. Pl. lxxii, 99.	190	Existing length 13.3 cm.; broken at the base. There is no decoration; the pin tapers to a point.
2' 6"	Decorated sherd. Pl. lxxii, 92.	191*	Green-buff pottery with dull plum-colour paint. Design, an effaced spiral.
2' 6"	Stack of animal bones.	192	See Section 25, p. 93.

Depth.	Object.	Plan No.	Remarks.
2' 6"	Base of a large pot.	193	The interior was lined with well-preserved basketry. Unfortunately the specimen was broken in packing.
2' 6"	Spindle whorl. Pl. lxxii, 103.	194	Limestone, hemispherical.
2' 6"	Coffin burial.	195	See Section 21, p. 90.
2' 6"	Coffin burial.	196	See Section 21, p. 90.
3'	Tanged arrow-head. Pl. lxxxi, 99.	194a*	Length 5.2 cm. Secondary work is confined to the tang, which is heavily worked on alternate edges. Broken tip.
3'	Bone pin. Pl. lxxii, 128.	194b	Broken; existing length 6.8 cm. Distal half of left tibio-tarsus of a <i>Corvine</i> bird, rather larger than a rook.
3'	Oval notched scraper. Pl. lxxxi, 104.	—	Length 4.6 cm., on a thin flake. Rough marginal retouch. (Ashmolean.)
3' 6"	Hut circle.	197	See Section 17, p. 84.
3' 6"	Clay object.	—	Oval, about 5.6 × 3.5 cm., and about 1 cm. thick, covered with incised irregular lines. Possibly has a connexion with the figurine plan 330 (pl. lxxii, 135).
3' 6"	Single end scraper. Pl. lxxxi, 118. Pl. lxxiii, 165.	—	Length 6.6 cm. Made on a plano-convex flake, the upper-face retaining the cortex. Fine scraping retouch. No lateral trimming. (Ashmolean.)
4'	Black-topped pot. Pl. lxxvii, 6.	198*	Corpus type approx. B 42b. S.D. 31-50.

39. AREA E. GENERAL OBSERVATIONS

Depth 4 ft. to 6 ft. 6 ins. The area was a continuation of A5. A line of black, thick hearth, compact with sheep or goat dung, appeared at 2 ft. to 2 ft. 6 ins.; this was traced for about 11 ft. only in this area, but was subsequently found to continue with longitudinal extension into the next strip. This hearth was useful stratigraphically, since, though it did not extend actually over hut circle 252, it ended alongside on a higher level, and could only have been made after the hut fell into disuse. Its age seems to be within the span of the decorated pottery. Sherds plan 84, 200, 205, and a wavy-handled fragment plan 120, were found in immediate relation to it.

A lower hearth resting upon the breccia appeared to have been cut into when the foundations of hut circle 252 were laid. The evidence for its age is confused, since Badarian sherds plan 215, 215b, and 217b lay upon, or somewhat over, it: there is no doubt that it is simply a continuation of the lower hearth traced in the other areas. The lowest levels of this section were rich in Badarian sherds, many of which lay upon the breccia. Two sherds were also found *beneath* the breccia, which was here

about 10 ins. thick; one of these is distinctively and certainly Badarian, the other, plan 228h, is faintly combed on the interior only. The breccia showed considerable irregularities of level.

AREA E. INVENTORY

Depth.	Object.	Plan No.	Remarks.
9"	Stack of animal bones. Pl. lxix, 2.	206	Dogs. See Section 26, p. 94.
3"	Stack of animal bones.	208	<i>Bos.</i> See Section 25, p. 93.
3"	Stack of animal bones.	210	<i>Bos.</i> See Section 25, p. 93.
6"	Stack of animal bones. Pl. lxxviii, 2.	218	<i>Bos.</i> See Section 25, p. 93.
6"	Stack of animal bones. Pl. lxxviii, 4.	219	<i>Bos.</i> See Section 25, p. 93.
9"	Stack of animal bones. Pl. lxxviii, 5.	220	<i>Bos.</i> See Section 25, p. 93.
9"	Stack of animal bones. Pl. lxxviii, 3.	221	<i>Bos.</i> See Section 25, p. 93.
9"	Stack of animal bones. Pl. lxxviii, 1.	222	<i>Bos.</i> See Section 25, p. 93.
6"	Stack of animal bones. Pl. lxxviii, 3. Pl. lxvi, 3.	223	<i>Bos.</i> See Section 25, p. 94.
1'	Two decorated sherds.	200-1*	(Ashmolean.)
1'	Decorated sherd.	202*	Three rush bands. (Ashmolean.)
1'	Bone awl. Pl. lxx, 31.	203	Length 7.5 cm.
1'	Small core scraper. Pl. lxxviii, 28.	—	—
1'	Decorated sherd. Pl. lxx, 16.	—	Effaced spiral. (Manchester.)
1'	Bone harpoon. Pl. lxx, 32.	207*	Existing length 7.5 cm., but tip broken. Unilateral type; one barb only remains, but there have been at least three others. The specimen is in bad condition. Bone harpoons are rare in the Predynastic, and a well-authenticated typological series has not yet been made out.
1' 6"	Single end and side scraper. Pl. lxxix, 32.	204	On a flake 6.7 cm. long. Upper-face shows three longitudinal flake-scars and separating flake-ridges; one side retains the white cortex. Perpendicular retouch at convex working end extending up one margin. Plain flake under-surface with truncated bulb.
1' 6"	Coffin burial.	224	See Section 21, p. 90.
1' 6"	(a) Borer or awl. Pl. lxxi, 86. Pl. lxxix, 51.	205*	Length 8.3 cm. Plain narrow flake with central flake-ridge, trimmed to a fine point by thinning retouch on both sides. Broken base.
	(b) Decorated sherd. Pl. lxxi, 52.	205*	Rim and shoulder in buff ware with plum-colour paint. Corpus D 24a. S.D. 61-63.

Depth.	Object.	Plan No.	Remarks.	Depth.	Object.	Plan No.	Remarks.
2' 6"	Wavy-handled sherd. Pl. lxxii, 94.	207a*	Pink pottery. The sherd is too worn for good dating, but appears to be not later than a s.d. 50-60 type.	4'	Small Badarian trimmed blade. Pl. lxxxii, 135. Pl. lxxxiii, 195.	217a*	Length 6.3 cm. in light brown chert. A strip of white cortex runs up the back edge. Slight nibbling re-touch around the butt extending up the cutting edge. Plain flake under-surface with bulb.
2' 6"	Fish-tail knife. Pl. lxxii, 98. Pl. lxxx, 72.	216	Length 16.7 cm. A very fine specimen in pink-buff chert, found in two cleanly fractured halves lying within an inch or two of each other. The surface had been ground on both sides before pressure-flaking removed all but small patches. A small area of white crust remains on the butt. The fish-tail functional end is fitted with minute serrations; these extend up the side edges to within 7 cm. of the butt, the haft probably covering the blade up to this point. The end is of the V-shape type. Compare with plan 24 in this respect. It is interesting to find such a fine specimen in a poor settlement. The knife shows no sign of wear, and is as sharp as on the day it was made.	4' 6"	Concave base arrow-head. Pl. lxxxiii, 157.	228	A rough specimen, with both wings and tip broken. Compare with plan 227.
				4' 6"	Badarian combed sherd. Pl. lxxiv, 200.	—	Grey ware, with plain black interior.
				4' 6"	Oval scraping flake. Pl. lxxxiii, 155.	—	Length 5.6 cm. Good alternate marginal retouch. Plain flake under-surface with bulb removed. (Ashmolean.)
				4' 6"	Notched scraper. Pl. lxxxiii, 153.	—	On a flake 7 cm. long. Heavy marginal retouch on sides and ends, with two pronounced lateral and terminal notches. Plain flake under-face with bulb removed. (Ashmolean.)
2' 6"	Copper wire pin. Pl. lxxii, 100.	211	Length about 7.2 cm.	4' 6"	Trimmed flake. Pl. lxxxiii, 159.	—	Showing intermittent marginal nibbling. Plain bulbar under-face with <i>écaillage</i> . The basal spur appears to be accidental. (Manchester.)
2' 6"	Coffin burial.	226	See Section 21, p. 91.	4' 6"	Badarian uncombed sherd. Pl. lxxiv, 211.	—	Red and black mottled and polished ware. Black interior upon which is impressed a faint pattern.
3'	Spindle whorl. Pl. lxxii, 137.	209	Grey limestone. Thick cylindrical type.	4' 6"	Badarian combed sherd. Pl. lxxiv, 202.	228a	Black-topped rim and grey body. Combed both sides.
3'	Bone or ivory pin. Pl. lxxii, 126.	212	Length 7 cm. At 1.4 cm. from the base is an irregularly scratched encircling line. A groove is cut across the basal section ⊖.	4' 6"	(a) Perforated disk in Badarian combed ware. Pl. lxxiv, 215. (b) Bone awl. Pl. lxxiv, 214.	228b*	Black-topped sherd, combed outside only. The disk is 3 × 3.5 cm. in diameter.
3'	Spindle whorl.	213	Limestone. The perforation is barely begun, being carried 0.8 cm. deep at one end, and less at the other. The process shows rotatory grinding by stone. The whorl is barrel shape.			228b*	Half of distal end of metacarpus of an antelope, perhaps a gazelle, larger than a Dorcas gazelle. (Manchester.)
3' 6"	Extended burial. Unfinished end scraper. Pl. lxxxi, 120.	214	See Section 21, p. 90.	4' 6"	Carinated core scraper. Pl. lxxxiii, 163.	—	
		—	Length 5.3 cm., on a thick flake, roughed out, but with no secondary work. Plain bulbar under-face. (Ashmolean.)	4' 9"	Coffin burial.	217	See Section 21, p. 90.
4'	Two Badarian combed sherds. Pl. lxxxiii, 173. Pl. lxxxiii, 178.	215*	(1) Fine, lustrous black rim, combed both sides. (2) Coarser red-brown ware, combed outside only. Dull black interior.	5'	Badarian uncombed sherd. Pl. lxxiv, 237.	215c	Red exterior; dull black interior, with impressed decoration.
4'	Badarian combed sherd. Pl. lxxxiii, 174.	215a	Rim of fine black-topped ware with grey body, combed both sides.	5'	Badarian combed sherd.	—	Grey, black-topped ware, with rivet hole. (Ashmolean.)
4'	Small curved blade. Pl. lxxxii, 136. Pl. lxxxiii, 175.	—	On a flake 5.3 cm. long. The upper-face is formed of three main flake-scars, with secondary retouch up the right edge, and blunt curved tip. Constricted base with unilateral notch. Plain flake under-surface with bulb. Compare with plan 27f.	5'	Pierced marine shell.	228c	<i>Conus</i> sp., near textile L.
				5'	Badarian pot fragments. Pl. lxxiv, 229.	228d	Base and rim, in uncombed red polished ware. Rectangular rim, straight sides. Flat base. The type resembles Miscellaneous no. 3, pl. xvi. Unpolished red interior.
4'	(a) Grey granite ball. Pl. lxxxiii, 183. (b) Badarian combed sherd.	215b*	Hexagonal form.	5'	Badarian combed sherd.	—	Red ware, carinated.
		215b*	—	5'	Concave base arrow-head. Pl. lxxiv, 235. Pl. lxxxiii, 167.	227*	Rough specimen, but unbroken. Resembles plan 228. Lying on breccia.
				5'	Black-topped sherd. Pl. lxxiv, 217.	227a*	Slightly outcurved rim of small pot. Type uncertain. Lying on breccia.

Depth.	Object.	Plan No.	Remarks.
5'	Badarian combed sherd. Pl. lxxiv, 227.	217b	Fragment of bowl; grey exterior, plain black interior. Portion of rounded base only. Lying on breccia.
5'	Black-topped sherd. Pl. lxxiv, 216.	—	Rim.
5'	Circular core scraper. Pl. lxxxiii, 178.	—	Showing two clearly defined patinations. The later flake-scars are numbered 1-4. (Ashmolean.)
5' 6"	Pear-shape core implement. Pl. lxxxiv, 182.	—	One side has been flaked hand-axe fashion, the butt retaining the white crusted nodule. The other side shows two flake-scars and central flake-ridge, but no secondary work.
5' 6"	Badarian combed sherd. Pl. lxxv, 247.	—	Black ware. Combed both faces.
5' 6"	Badarian combed sherd. Pl. lxxv, 245.	—	Grey exterior, plain black interior.
5' 6"	Pointed flake. Pl. lxxxiv, 187.	—	Length 5.7 cm. No secondary retouch. Small patch of orange-colour crust near tip. Plain bulbous underface. (Ashmolean.)
5' 6"	Badarian combed sherd. Pl. lxxv, 250.	—	Red exterior, black interior with impressed linear pattern.
6'	Carinated core scraper. Pl. lxxxiv, 200.	—	—
6'	Badarian combed sherd. Pl. lxxv, 268.	—	Black-topped red ware of fine quality, combed both sides.
6'	Black-topped ware rim. Pl. lxxxiv, 199.	228e*	Lying on breccia.
6'	Heavy nodular scraper. Pl. lxxxiv, 199.	—	An amorphous lump with orange-colour cortex, upon which a striking platform has been made; from this a few flakes have been struck. The tool is typically Badarian. Lying on breccia.
6'	Two carinated core scrapers. Pl. lxxxiv, 195. Pl. lxxxiv, 196.	—	Lying on breccia.
6'	Rim of rough ware.	228f	With a "milled" edge, as plan 96, but not the same pot. Badarian.

BENEATH BRECCIA

6' 6"-7'	Badarian combed sherd. Pl. lxxvi, 287.	228g*	Fine black-topped carinated grey ware, combed both sides.
6' 6"-7'	Badarian sherd? Pl. lxxvi, 282.	228h*	Part of black-topped rim with rivet hole in thick ware. A faint rippling on interior. Possibly unfinished, but essentially of the same class as Badarian implements plan 280, 294. In this case the cortex is white, not orange. (Manchester.)
6' 6"	Rough push-plane. Pl. lxxxv, 207.	—	

40. AREA F. GENERAL OBSERVATIONS

Depth 5 ft. to 6 ft. 6 ins. A continuation of area A6. The upper hearth continued, extending north-

west, and was found to overlies hut circles 242 and 265 in an interesting manner. Owing presumably to the filling of the derelict huts beneath being less consolidated than the surrounding midden accumulations, a depression in the ground appears to have been created above their apertures, and here the ashes of later encampments had accumulated in the manner shown in pl. lxvii, 4, and in section pl. lxiv.

AREA F. INVENTORY

Depth.	Object.	Plan No.	Remarks.
1'	Decorated sherd.	—	Rush lines. (Ashmolean.)
1'	Decorated sherd.	—	Rush lines, but not same pot as preceding.
1'	Decorated sherd. Pl. lxx, 23.	—	Two parallel lines only. (Manchester.)
1'	Fragment of copper tool or ornament. Pl. lxx, 38.	229	Length 3.5 cm. Flat.
1'	Copper pin.	230	Length 8.8 cm.
1'	Flint pebble resembling human face. Pl. lxx, 41.	231*	It is not possible to be sure whether this has been retouched by hand. The "eye" is due to concretionary impurity, but may have been artificially accentuated. The reverse is nodular and shapeless.
1'	Coffin burial.	235	See Section 21, p. 91.
1' 6"	Store pit.	236	See Section 17, p. 87.
1' 6"	Bull or Hathor-head amulet. Pl. lxxi, 63.	232*	In white limestone, degraded in type. The horns are vestigial. A horizontal perforation at the back has been broken. This type of amulet was in vogue from Early Predynastic to Protodynastic times.
2'	Two end scrapers. Pl. lxxxix, 44.	233*	(a) Formed on a thick, tapering flake 8.5 cm. long, in white speckled chert. Upper-face shows two flake-scars with central flake-ridge; careful perpendicular trimming at convex scraping end. Plain underface with bulb removed by thinning retouch at point, and bold underflaking of lateral edges. (b) Formed on a flake 6.5 cm. long, in general form resembling the preceding but less carefully retouched.
	Pl. lxxxix, 45.		
2'	Child's mud vase. Pl. lxxvii, 19.	—	—
2'	Coffin burial.	234	See Section 21, p. 91.
2'	Pottery boat. Pl. lxxi, 80.	237	Half only. Same type as plan 125, but heavier build.
2'	Decorated sherd. Pl. lxxi, 74.	238*	(a) Pink ground, plum-colour paint. The same animal as plan 83, but larger. Type as Corpus D 78f. (b) On broken flake of grey chert. Upper-face shows two flake-scars and low flake-ridge; retouched at end and sides. The butt end is fractured. Plain flake under-surface.
	Oval scraper. Pl. lxxxix, 46.		

Depth.	Object.	Plan No.	Remarks.	Depth.	Object.	Plan No.	Remarks.
2' 6"	Rim and side of red-polished pot. Pl. lxxii, 93.	239*	Nearest appears to be Corpus P 96c, s.d. 57-64; but the type, with slight variations, has a long span.		(c) N a r r o w double end scraper on blade. Pl. lxxxii, 90.		(c) Length 8 cm., worked on a thin flake with flat longitudinal flake-scars and very delicate marginal retouch around ends, extending up one lateral edge. Plain under-face, the bulb having been removed.
2' 6"	Group of four flints. Pl. lxxii, 107. Pl. lxxx, 61.	240	(a) Fine circular scraper, about 4.5 cm. in diam. on a flake of buff chert. Fine edge trimming. Plain flake under-surface with bulb partially removed by marginal retouch. (b) Pair of sickle-flints. No. 65, 11.5 cm. long, pointed and oblique end trimmings. Friction polish on saw edge. No. 71 9.5 cm. long, incomplete with strip of cortex on upper-face and unfinished edge; rectangular scraping end.		(d) Hollow bone. Pl. lxxii, 131.		(d) Length 7 cm. Possibly used as a paint tube? The bone is indeterminate. Limestone; hemispherical.
	Pl. lxxx, 65, 71.			3'	Spindle whorl. Pl. lxxii, 140.	246	
	Pl. lxxx, 66.		(c) Flake 7.3 cm., trimmed to an obliquely tipped knife; retouch up back edge, with light nibbling on cutting edge. A notch near the base, as though hafted. Plain under-face with bulb.	3'	Crescentic knife. Pl. lxxxii, 102.	247*	Of honey-colour translucent chert 11.7 cm. in length, coarsely flaked over both faces.
				3'	Hut circle. Pl. lxvi, 1, 2, 3.	248	See Section 17, p. 84.
				2' 6"	Hut circle. Pl. lxvi, 1, 2, 3.	249	See Section 17, p. 85.
				3'	Hut circle. Pl. lxvii, 2.	252	See Section 17, p. 85.
				3' 6"	Group of three end scrapers. Circular scraper. Pl. lxxxii, 110. Pl. lxxxiii, 163.	251	(a) On a thick, slightly plunged flake of chocolate-coloured chert. Diam. about 4.5 cm. Poor workmanship, with several misdirected blows. Untrimmed under-face with heavy bulb.
2' 6"	Large circular scraper. Pl. lxxx, 60. Pl. lxxii, 109.	241	A fine specimen 10 x 11 cm. in diam. Made on a flake of pink, white-crusted chert, plano-convex in section. The whole upper-face retains the cortex except where marginal retouch has removed it by slanting flakes. No work is seen on the flat under-face, but traces of a negative bulb. Plan 71 shows an early stage in the manufacture of this type.		Oval scraper. Pl. lxxxii, 109.		(b) On flake 4.4 cm. long. Upper-face made of three main flake-scars separated by low flake-ridges; finely retouched round end. Plain under-face with prominent bulb.
					P e a r - s h a p e scraper. Pl. lxxxii, 108. Pl. lxxxiii, 162.		(c) On plano-convex flake 5.5 cm. long. Finely retouched around end and both sides. A patch of cortex remains on upper-face. Plain under-surface with truncated bulb.
3'	Ovate quartz hammer stone. Pl. lxxii, 133.	243	(a) Length 10.5 cm. Bruised by use at both extremities. The surface is glossy, probably by ancient sand polish of the pebble.	3' 6"	Spindle whorl. Pl. lxxxiii, 167.	253*	Grey limestone, barrel shaped.
	Spindle whorl. Pl. lxxii, 138.		(b) Limestone; hemispherical. (Manchester.)	3'	Hut circle. Pl. lxvi, 3.	242	See Section 17, p. 84.
3'	Single end scraper on blade. Pl. lxxx, 80.	—	Length 7.1 cm. The scraper has an opposed point, carefully worked down from the upper-face, which shows two steeply-pitched antichinal flake-scars, separated by a sharp flake-ridge. Perpendicular end trimming. Plain flake under-surface, the bulb being removed during fashioning of the point.	4'	Small carinated core scraper. Pl. lxxxii, 141.	—	—
				4'	Small trimmed flake. Pl. lxxxii, 127.	—	Length 4.9 cm. Retouch up one edge extending round curved tip. Bulbar under-face. Similar to pl. lxxxiii, 160 and 170.
3'	Malachite nodule.	244	—	4'	Coffin burial.	250	See Section 21, p. 91.
3'	Group of (a) Spindle whorl. Pl. lxxxii, 92. (b) Sickle-flint. Pl. lxxxii, 91.	245	(a) Limestone; hemispherical. (b) Length 10.4 cm., on slightly concave flake with pointed and oblique ends. Teeth rubbed down with use and much polished. Bulb has been at pointed end, but flaking has nearly removed it. Nibbling retouch on back under-edge.	4' 6"	Trimmed pointed flake. Pl. lxxxiii, 156.	—	Length 4.2 cm. Retouch on one lateral edge, near point, which is trimmed in a pseudo-burin fashion. Plain flake under-face with bulb and <i>écaillage</i> . (Ashmolean.)
				5'	Rough scraper flake. Pl. lxxxiii, 179.	—	Diam. about 4 cm. Upper-face shows a concave flake-scar worked to a steep scraping edge. Under-face is a flake-surface with bulb and <i>écaillage</i> .
				5'	Small rough pot. Pl. lxxxiv, 230.	255	Thick red pottery with pointed base and moulded rim. Lying on breccia.
				5'	Red-polished sherd. Pl. lxxxiv, 233.	255a	Bowl shaped, red interior. Badarian? Lying on breccia.

Depth.	Object.	Plan No.	Remarks.
5'	Badarian combed sherd. Pl. lxxiv, 224.	255b	Rim of very thin, black-topped grey ware, combed both sides.
5'	Rough red sherd with pot-mark. Pl. lxxiv, 219.	256a	Potmark represents a leaf.
5'	Carinated core scraper. Pl. lxxxiii, 174.	—	—
5'	Small knife. Pl. lxxxiii, 169.	256b	Made on a concave flake, 9 cm. long, in honey-colour chert. One edge is carefully retouched, the other abraded by use. Plain under-face with traces of bulb at tip end. Made of the same flint as plan 179.
5'	Badarian black-polished sherd. Pl. lxxiv, 221.	—	The exterior shows a streaky burnish, but no combing.
5'	Rough sherd with incised decoration. Pl. lxxiv, 220.	—	The pattern shows two parallel rows of linked circles.
5'	Black-topped rim.	—	Ordinary Predynastic type.
5' 6"	Badarian combed sherd. Pl. lxxv, 248.	256c*	Black-topped grey ware, combed both faces. Two rivet holes. Lying on breccia.
5' 6"	Small carinated core scraper. Pl. lxxxiv, 191.	256d	Lying on breccia.
6'	Rectangular rim in polished red ware. Pl. lxxv, 273.	—	Same type as plan 228d, but belongs to a smaller pot. Lying on breccia.
6'	Small carinated core scraper. Pl. lxxxiv, 202.	—	Lying on breccia.
6' 6"	Contracted burial. Pl. lxvii, 2.	256	See Sections 17 and 22. Lying under hut circle 252.
6' 6"	Implement with oblique boring point. Pl. lxxxv, 205.	257	Length 6.8 cm. Made on a roughly prepared flake, probably of thermal origin. The type is allied to pl. lxxxiv, 194 at 6'. Lying on breccia.
BENEATH BRECCIA			
7' 4"	Badarian bowl. Pl. lxxvi, 277.	257a*	Half only, in two pieces. A bowl of the coarser Badarian pottery in dark grey, hand-smoothed ware, with no combing.

41. AREA G. GENERAL OBSERVATIONS

Depth—maximum 6 ft. Twenty feet of this area at the eastern end were under 4 ft. in depth, and contained nothing; the deposits thickened between the 25-ft. and 50-ft. pegs, and a tilted line of hearth appeared, 2 ft. 6 ins. from the surface, sloping up to within 12 ins. of it. This dip was found to be the east-west angle of the breccia at this place

(pl. lxxv, 4). The typical Badarian flint implement plan 280 lay upon the breccia beneath it. The little blade plan 348 also came from beneath the hearth, as did a white-cross-lined sherd, plan 334. Several black-topped sherds were found near together in this area at the 3 ft. 6 ins. level, and are possibly contemporary with the hearth; they are represented by rims plan 337-340 inclusive. A second line of hearth was noted for a distance of 15 ft., lying immediately beneath the surface scree, but there was nothing to indicate its age. The area was rich in material, particularly on one side of hut circle 265, and on both sides of the long mud wall. In Chapter IV I have suggested this is later in date than the huts.

AREA G. INVENTORY

Depth.	Object.	Plan No.	Remarks.
1'	Decorated sherd.	—	Four rush lines. (Ashmolean.)
1'	Decorated sherd. Pl. lxx, 17.	—	Buff ground, plum-colour paint, pattern not identified.
1'	Decorated sherd.	—	Eight rush lines. (Ashmolean.)
1' 6"	Decorated sherd. Pl. lxxi, 53	—	Six "S" birds. (Ashmolean.)
2'	Decorated sherd. Pl. lxxi, 75.	258*	(a) Buff-green ground; Indian red paint. Parallel ripple lines within containing band.
	Small knife with oblique tip. Pl. lxxix, 49.		(b) Length 6.5 cm. Half the upper-face retains the cortex. Carefully trimmed tip, and a limited amount of marginal retouch near the base. Plain under-surface.
2'	Fine knife. Pl. lxxi, 84. Pl. lxxix, 53.	259*	Length 14 cm. in translucent honey-colour flint. Straight-bladed type, narrowing to the blunt tip. A well-defined single shoulder has been made. Convex butt. Compare with plan 50, 63.
2'	Carinated core scraper. Pl. lxxx, 68..	—	
2'	Mud toy vase. Pl. lxxvii, 18.	—	In roughly baked pottery, diam. about 3.5 cm., made in hollowed ball of clay.
2'	Mud toy vase.	260	Minute bowl, diam. about 3.5 cm.
2' 6"	Long mud and wattle wall.	261a	See Section 17, p. 87.
3' 9"	Store hole.	261b	See Section 17, p. 87.
2' 6"	Decorated sherd. Pl. lxxxv, 219.	261c*	Twelve rush lines. The fragment almost certainly belongs to plan 159 (B 2'), though no fit is possible.
2' 6"	Oval scraper. Pl. lxxxv, 220.	261d	On concavo-convex flake 6 cm. long. Slanting marginal retouch around end and both side edges. Thick, truncated butt. Under-side a plain flake surface with heavy bulb.
2' 6"	Base of red-polished or black-topped pot.	—	Pointed base. Corpus type B 47. S.D. 32-80.

Depth.	Object.	Plan No.	Remarks.	Depth.	Object.	Plan No.	Remarks.
2' 6"	Spindle whorl. Heavy circular scraper. Pl. lxxii, 108. Pl. lxxx, 69.	262	(a) Limestone, hemispherical. (b) Diam. about 6.5 cm. in chocolate - colour chert. Upper-face formed of one main flake-scar considerably "plunged" and minor scars. The intention was clearly to reduce the thickness of the flake, but the attempt was abandoned when the flake plunged. Carefully executed steep retouch around the edges. Plain flake under-surface, with bulb removed by edge trimming.	3'	Pointed trimmed flake. Pl. lxxxi, 97.	270f	10.5 cm. long, belonging to the three-faced type of plan 50 and 74. One side of the upper-face is flaked. The under-margin of the opposite (cutting) edge is heavily abraded. Plain flake under-surface with bulb removed. Rectangular butt.
	Flat oval scraper. Pl. lxxx, 70.		(c) A thin flake of yellow chert, length 8.5 cm., worked around edges with fine retouch at broad end. Plain under-face with fractured bulb area.	3' 6"	Rim of black-topped pot. Pl. lxxiii, 150.	270e	Small; fine ware. Resembles Corpus B 65. s.d. 47. Lying on breccia slope.
3'	Hut circle.	265	See Section 17, p. 86.	3' 6"	Pointed ovate end scraper. Pl. lxxxi, 107.	264	Length 6.5 cm. Upper-face of two main longitudinal flake-scars partially retouched at right angles, and with secondary marginal trimming. Fractured bulb at pointed end.
2' 6"	Single end side scraper. Pl. lxxx, 62.	267	Length 5 cm., on thick pear-shape flake with plano-convex section. Cortex on upper-face, trimmed away steeply to the edges. Plain under-face with truncated bulb.	4'	Rim of black-topped pot. Pl. lxxiii, 169.	—	—
2' 6"	Mud toy bowl. Pl. lxxvii, 21.		Diam. at mouth 4.8 cm.	4'	For Roughly trimmed flake. Pl. lxxii, 147.	271	See Area H, 4, p. 116.
2' 6"	Copper pin.	269	Length about 8 cm.	4'	Small Badarian trimmed knife. Pl. lxxii, 129.	—	5.2 cm. long on a thick flake of triangular section.
2' 6"	Mud toy vase. Pl. lxxvii, 22.	270	Decorated with small circles, punched with some small hollow object, perhaps a small bone.	4'	Pl. lxxiii, 189.	272	Length 7.4 cm., in smoke-grey chert. Upper-face formed of longitudinal flake - scars. Fine retouch confined to curved tip and down back edge. Some trimming of base end. Under-face a plain flake-surface with bulb removed by trimming. Lying on settlement bottom.
2' 6"	Base of black-topped or red-polished pot.	—	Pointed base. Corpus type B 47. s.d. 32-80.	4'	Rough red pot. Pl. lxxiii, 182 (seed).	263*	Corpus type R 94h. s.d. 48-53, 59. Found lying on its side, filled with flax seed or linseed.
3'	Small Badarian trimmed knife. Pl. lxxxi, 94.	—	Length 6.4 cm. Made in brown chert. Closely resembles plan 272a. Retouch confined to curved tip and butt. (Ashmolean.)	4'	Pl. lxxvii, 4.	272a	Length 5.6 cm., in smoke-grey chert. Upper-face of two longitudinal flake - scars with central ridge. Curved tip shows fine retouch. The back edge is untrimmed, except for slight nibbling around the base. A notch near the base is also seen in plan 273, as though hafted. Lying on settlement bottom.
3'	Decorated sherd. Pl. lxxii, 113.	270a	Spiral.	—	Small Badarian trimmed knife. Pl. lxxii, 131.	273	Length 5.1 cm., in smoke-grey chert. In this case blunting is carried down the back edge. Fine retouch around curved tip and base. Plain flake under-face with bulb removed. Practically on settlement bottom.
3'	Sickle-flint.	270b	Length 6.5 cm. Concave flake with sharply denticulated sickle-teeth and battered back.	4'	Pl. lxxiii, 191.	274	Made on orange crusted chert, similar to that used for the Badarian push-planes. Lying on breccia.
3'	Bone awl. Pl. lxxii, 125.	270c	Length 10 cm. Worked to a tapering point.	4'	Badarian carinated core scraper. Pl. lxxiii, 187.	275*	Coarse red ware with plain black interior. Very lightly combed. On settlement bottom.
3'	Incised sherd. Pl. lxxii, 121.	270d	Herringbone pattern. Type as plan 110, but does not apparently belong.	4'	Pl. lxxii, 142.	—	On concavo-convex flake, 7.7 cm. long. Rough cortex remains, flaked away from cutting edge. Retouch continued around tip. Plain bulbar under-face. (Ashmolean.)
3'	End scraper with opposed point. Pl. lxxx, 84.	—	Length 4.6 cm. Upper-face of two longitudinal flake-scars and strip of white cortex. Base trimmed to an oblique point, probably following on an accidental fracture. Plain under-face with bulb removed.	4'	Badarian combed sherd. Pl. lxxiii, 170.		
3'	Small pointed flake. Pl. lxxx, 85.	—	With boring point worked down from both sides.	4'	Roughly trimmed blade. Pl. lxxii, 128.		
3'	Oval scraper. Pl. lxxx, 75.	—	Upper-face shows two broad flake - scars with central ridge. Retouch around edge. The scraping end is fashioned on the bulbar area. Plain flake under-surface.				
3'	Sickle-flint. Pl. lxxxi, 106.	—	Length 7.1 cm.; oblique ends. Worn serration. (Ashmolean.)				

Depth.	Object.	Plan No.	Remarks.	Depth.	Object.	Plan No.	Remarks.
4'	Small Badarian trimmed knife. Pl. lxxxii, 130. Pl. lxxxiii, 90.	276*	Length 7.0 cm. Essentially the same as plan 272, etc., but with a convex instead of a straight cutting edge. Made of the same smoke-grey chert. Upper-face shows 3 longitudinal flake-scars; careful retouch around curved tip and base. Intermittent nibbling up back edge. Plain flake under-face with traces of bulb at tip. Jagged cutting edge. Practically on settlement bottom.	4'	Rough oval scraper.	288	Made on a heavy flake 9 cm. long. Upper-face partially covered with white cortex. Coarse texture, black interior.
4'	Carinated core scraper. Pl. lxxxii, 139.	277	—	4'	Dark brown polished sherd.	290	On flake 3.5 cm. long. Retouch confined to the scraping end and up one side. Flake under-surface with bulb.
4'	Split bone awl.	278	Length 6.8 cm. The bone is indeterminable.	4' 6"	Small oval scraper. Pl. lxxxii, 123.	291	Fragment of bowl rim, decorated on interior with white spots.
4'	Pierced marine shell. Pl. lxxxiii, 185.	279	<i>Murex tenuispina</i> Lam. Habitat, Red Sea, etc.	4' 6"	White-cross-lined sherd. Pl. lxxxiv, 196.	289*	Fine black-topped rim, brown body. Combed both sides.
4'	Nodular end scraper or push plane. Pl. lxxxii, 143. Pl. lxxxiii, 186.	280*	A typical Badarian tool, length about 8 cm., made on a rough, amorphous nodule which retains orange cortex on the upper-face, and which is chipped away marginally, with careful retouch at one side, leaving an angular spur the other. Under-face an irregular fractured surface. Lying on settlement bottom.	4' 6"	Badarian combed sherd. Pl. lxxxiv, 205.	292*	Unpolished red exterior, lustrous black interior, with undercut, out-curving lip. Evidently belongs to an open bowl, on account of interior burnishing. Suggests analogies with Corpus types "Fancy" F 15d. s.d. 36, and other early types. Compare plan 340.
4'	Carinated core scraper. Pl. lxxxii, 138.	281	—	4' 6"	Fragment of rim. Pl. lxxxiv, 212.	293*	The upper-face is covered with orange cortex. Retouch is confined solely to the convex end. The opposite end is naturally fractured. Under-face shows two old thermal cavities. (Ashmolean.)
4'	Round flat scraper. Pl. lxxxii, 122. Pl. lxxxiii, 188.	282	Broken, but original diam. about 11.5 cm., made on pink-buff chert with white cortex on upper-face. Fine marginal flaking. Untrimmed flat under-surface, showing banded structure of the chert. The type is allied to plan 104 and 241, but is rougher and heavier. It appears, however, both in material and technique to be a Middle Predynastic accidental intrusion into an earlier stratum.	4' 6"	End scraper on thermally fractured flint. Pl. lxxxii, 150.	—	A "rostr-carinated" tool, made on a lump of orange-crusted chert. The main scraping end is worked steeply down by a series of seven fan-like flake-scars with additional edge trimming of the foot. The narrow opposite end has also been retouched into a steep scraper. The under-face is formed of two old naturally fractured, brown patinated surfaces, meeting at an angle. Typically Badarian.
4'	Carinated core scraper. Pl. lxxxii, 140. Pl. lxxxiii, 181.	283	—	4' 6"	Nodular steep-ended scraper or push plane. Pl. lxxxiii, 161. Pl. lxxxiv, 208.	294*	Length 13.5 cm. Pink chert flaked all over both faces. Thin section, rounded tip; parallel cutting edges. Broken butt.
4'	Carinated core scraper. Pl. lxxxii, 146.	—	—	4' 6"	Fine knife. Pl. lxxxiv, 206. Pl. lxxxiii, 154.	264a	Fragment of carinated bowl in red-polished ware, with rivet hole. (Ashmolean.)
4'	Badarian combed sherd. Pl. lxxxiii, 177.	284*	Brown ware with exterior combing only.	4' 6"	Badarian combed sherd. Pl. lxxxiv, 199.	—	Smoked red pottery, with rivet hole.
4'	Large quartz pebble.	285	Oval with oval section. The ends show bruised hammering areas as in plan 243, while the centre indicates additional use as a malachite grinder, two flat parallel grooves bearing faint traces of green powder.	5'	Badarian rough ware.	—	Bright plum-colour with a pronounced flatly outcurled and undercut lip. I am unable to trace the type, but the ware is Predynastic.
4'	Badarian combed sherd. Pl. lxxxii, 172.	286*	Black-topped red ware with light exterior combing and plain black interior.	5'	Red-polished rim. Pl. lxxxiv, 218.	294a*	Diam. about 5 cm. Strip of orange cortex on upper-face. Fairly good edge trimming. Under-face is an unskilfully struck flake-surface with bulb.
4'	Red-polished sherd.	287*	Grey interior. Corpus type B 64b. s.d. 37.	5'	Rough circular scraper. Pl. lxxxiii, 172.	294b	Plain red interior.
				5'	Red-polished sherd. Pl. lxxxiv, 225.	—	Black-topped, brown ware, combed both faces.
				5'	Badarian combed sherd.	—	

Depth.	Object.	Plan No.	Remarks.
5'	Badarian combed sherd. Pl. lxxiv, 228.	294c*	Rim of fine black-topped red ware. The combing is carried over the interior margin of the rim. Lying on breccia. With two rivet holes.
5'	Badarian rough sherd.	294d	
5'	Badarian combed sherd. Pl. lxxiv, 232.	—	Black-topped rim with two broken rivet holes. (Ashmolean.)
5'	Small scraper. Pl. lxxxiii, 173.	—	Made on a thin core, roughly worked. Length about 4.3 cm.
5' 6"	Pointed flake arrow-head? Pl. lxxxiv, 180.	295	In grey-green chert. Length 4.4 cm. A simple flake, the upper-face formed of two flake-scars and sharp central flake-ridge. A very fine retouch has been added to one under-edge, extending from butt to tip. Plain bulbar under-surface. Under the foundations of wall 261.
5' 6"	Red-polished sherd.	296	Polished both sides. Lying on breccia.
5' 6"	Badarian combed sherd. Pl. lxxv, 251.	—	The outer surface is worn away; the black interior shows an impressed meandering pattern. (Manchester no. 7712 B.)
5' 6"	Large piece of red-polished ware.	—	Under wall 261. Lying on breccia.
5' 6"	Badarian combed ware.	—	Black and grey, combed both sides. Under wall 261. Lying on breccia.
5' 6"	Coarse Badarian sherd.	—	Under wall 261. Lying on breccia.
5' 6"	Heavy core scraper. Pl. lxxxiv, 188.	261	Triangular, patch of cortex on centre upper-face. Very rudely trimmed. Lying on breccia.
5' 6"	Nodular core scraper or push plane. Pl. lxxxiv, 184.	261	Belongs to the Badarian tools plan 280, 294, 271, etc. Length about 5.5 cm. A cortex-covered pebble has been split to give a flat striking platform. A series of short parallel flakes form the functional end. Engrailed edge. Bulb on under-face. Lying on breccia.
5' 6"	Oval scraper. Pl. lxxxiv, 190.	—	On a flake of smoke-grey chert, 6 cm. long. Marginal retouch round end and up one side. Patch of white cortex on upper-face. Plain bulbar under-surface. (Ashmolean.)
5' 6"	Rough core scraper. Pl. lxxxiv, 185.	—	Made on a white crusted nodule, steeply flaked on one side only. (Ashmolean.)
6'	Base of ordinary red-polished pot. Pl. lxxv, 255.	—	Lying on breccia. (Ashmolean.)
6'	Badarian combed sherd. Pl. lxxvi, 279.	296a*	Red keeled bowl with plain black interior. A patch of breccia, in which it was embedded, adheres.
6'	Pointed flake. Pl. lxxxiv, 201.	—	Length 5.1 cm. The upper-face shows steep anticlinal flake-scars and a central flake-ridge. Very slight marginal retouch. (Manchester.)

Depth.	Object.	Plan No.	Remarks.
BENEATH BRECCIA			
6'	Badarian combed sherd. Pl. lxxvi, 285.	296c*	Black-topped red ware, plain black interior. Fine thin quality.
6' 6"	Badarian combed sherd. Pl. lxxvi, 284.	296b*	Red ware with plain black interior. Rivet hole. A patch of breccia adheres.
6' 6"	Rectangular carinated core. Pl. lxxxv, 206.	296d	A very rough specimen, possibly unfinished. The nodule is of the white-coated variety.

42. AREA H. GENERAL OBSERVATIONS

The settlement limits contracted at both ends, and sherds and flints were confined to a comparatively restricted central area. The slope towards the cliffs was now steepening, and it was surprising still to find a good depth of deposit, as well as an outlying hut circle, no. 268. The deposits were, however, rapidly becoming stonier and lighter in aspect. Notwithstanding this, they proved as prolific as Area G had done, though we found no definite hearths, with the exception of another grey mass overlying hut 268 (pl. lxvii, 5) and extending some distance along the section.

The second and last season was now at an end, and I closed down the work, having cleared the site in all directions except for its shallow marginal limits.

AREA H. INVENTORY

Depth.	Object.	Plan No.	Remarks.
1'	Sickle-flint.	297	Length 10 cm. Serration completely worn down, but traces of friction polish remain. Pointed and oblique ends. Back edge much battered.
1'	Sickle-flint. Pl. lxxviii, 25.	298	Length 6.7 cm. Usual type; 16 pronounced serrations of a square cut, friction polished. The ends are finished rectangularly. No battering upon back edge—an unusual feature.
1'	Decorated sherd. Pl. lxx, 19.	298a	(Ashmolean.)
1'	Mud toy vase. Pl. lxxvii, 20.	299*	Height 1.3 cm., in rough clay. The surface is decorated with punctuations; a pair of minute horizontal lug handles as in the stone vases have been added.
1'	Decorated sherd.	—	Eight rush lines. (Ashmolean.)
1' 6"	Decorated sherd. Pl. lxxi, 61.	300*	(Ashmolean.) Pink-buff ground, with four rush lines.

Depth.	Object.	Plan No.	Remarks.	Depth.	Object.	Plan No.	Remarks.
1' 6"	Oval single end and side scraper. Pl. lxxix, 33.	301*	On concavo-convex flake 7.3 cm. long, in grey-green chert. Upper-face shows broad, slightly concave flake-scars, trimmed down to a narrow perpendicular scraping end; one lateral margin is boldly flaked, the other shows nibbling retouch. Under-face is a plain bulbar surface. Faceted butt.	3'	Spindle whorl. Pl. lxxii, 141.	311a	Limestone; hemispherical. (Ashmolean.)
				3'	Decorated sherd. Pl. lxxii, 112.	312	There seems to have been a wavy handle broken away. On a broken blade.
				3'	Single end scraper. Pl. lxxxi, 88.	—	
				3'	Decorated sherd. Pl. lxxii, 114.	313	Design too fragmentary to trace.
				3'	Decorated sherd.	—	Linear design effaced. (Manchester.)
1' 6"	Small Badarian trimmed knife. Pl. lxxi, 55. Pl. lxxix, 40.	302	Length 5.5 cm., in smoke-grey chert. Upper-face formed of three main flake-scars and central ridges, retouched up back edge and round curved tip. Under-face unworked; well-marked ripple marks. Bulb has been trimmed away. The knife belongs to the set found in area G at 4', and here appears to be above its proper horizon.	3'	Sickle-flint.	314	Length 7.4 cm. Obliquely trimmed ends. Friction polish on serration. The other edge is heavily battered.
				3'	Rim of rough grey ware. Pl. lxxii, 119.	315	Outcurved; on neck a lightly incised zig-zag pattern.
				3'	Black-topped pot rim. Pl. lxxii, 122.	316	Incurved; black polished interior.
1' 6"	Sickle-flint. Pl. lxxix, 42.	303	Length 8 cm. Usual type with oblique end trimming. Serration much polished. Heavily battered back edge.	3'	Double end scraper. Pl. lxxx, 78.	317	On a flat, waisted blade, 6.6 cm. long. The convex end is treated by perpendicular retouch; the rectangular end is worked down more gradually to form a flatter scraping end. One of the lateral concavities shows a fine retouch; the other appears to be heavily worn. Plain under-face, the bulb having been trimmed away.
1' 6"–2'	Hut circle. Pl. lxxvii, 5.	268	See Section 17, p. 86.				
2'	Portion knife blade. Pl. lxxix, 55.	—	Existing length about 8.5 cm. The work is similar to that of plan 259. (Ashmolean.)				
2'	Rough red sherd. Pl. lxxi, 82.	304	Potmark; six radial lines.	3'	Small Badarian trimmed knife. Pl. lxxxi, 93.	318	Length 5.6 cm., in smoky-grey chert. Upper-face shows two flake-scars with dividing ridge. A strip of white crust has purposely been left on the back edge, but is trimmed away towards the curved tip which is finely retouched. Slightly abraded cutting edge. Plain under-face, the bulb removed, but ripple marks show the bulb was at the base end.
2'	Perforated pottery disk. Pl. lxxi, 81.	305	Made on a sherd of plum-colour polished ware. Diam. about 4 cm.				
2'	Decorated sherd. Pl. lxxi, 77.	—	Pinky-buff ware with Indian red paint. Five rush-work lines. (Ashmolean.)				
2'	Decorated sherd.	—	A pair of "S" birds.				
2'	Single end scraper. Pl. lxxix, 58.	—	On broken flake, 5.2 cm. long. Secondary retouch at end only. Strips of cortex up sides. (Ashmolean.)				
2' 6"	Chipped flint celt. Pl. lxxii, 97. Pl. lxxx, 64.	306*	Triangular form with a thin section. Similar to plan 6 at 3'. Length 5 cm. Irregularly flaked over both sides, with several cracked flake-scars.	3'	Microolithic flake. Pl. lxxx, 83.	319	Length 3.4 cm. Untrimmed except for minute retouch at tip. One edge slightly worn. Bulbar under-surface.
2' 6"	Oval flat scraper. Pl. lxxii, 106. Pl. lxxx, 63.	307	6.5 × 5 cm., made on a fragment of a broken ripple flaked knife, as plan 99, but with no remaining trace of original ground surface. It is retouched around the edge.	3'	Thin hollow bone tube.	—	Striations at both ends. (Ashmolean.)
				3'	Oval corescraper. Pl. lxxxi, 105.	320	Rough workmanship.
2' 6"	Decorated sherd rim. Pl. lxxii, 95.	308*	Same type as plan 159, but does not belong, and the pottery is buff-green, instead of pink. May belong to plan 121.	3'	Double end scraper. Pl. lxxx, 77.	321	Length 6.2 cm. Upper-face worked down from a central patch of cortex. The broad end is flaked to a shallow scraper by oblique retouch; the narrow end more steeply. This feature is characteristic of all the double end scrapers, as plan 317, 322, etc. Flat under-face with bulb removed.
2' 6"	Black-topped sherd. Pl. lxxii, 96.	309*	Rim.				
2' 6"	Perforated pottery disk.	310*	Made of a black-topped sherd.	3'	Double end scraper. Pl. lxxx, 79.	322	On a blade 6.5 cm. long. Upper-face shows four main longitudinal flake-scars and low flake-ridges. Perpendicular trimming at one end; the other flaked at a lower angle. The sides of the blade are also retouched. Plain under-face, with bulb removed.
2' 6"	Fragment of vase with lug handle.	311	In rough red pottery. The handle resembles those figured on rare red-polished vases such as Corpus P 80, etc.				
2' 6"	Granite ball. Pl. lxxii, 104.	—	In pink granite.				

Depth.	Object.	Plan No.	Remarks.	Depth.	Object.	Plan No.	Remarks.
3'	Rim of rough brown pottery. Pl. lxxii, 120.	323*	Sharply outcurved rim; the neck is decorated with an incised lattice design.	3' 6"	Black-topped pot rim. Pl. lxxiii, 154.	338	—
3'	Hollow bone tube.	324	Paint container? Length about 2.4 cm. only, but unbroken.	3' 6"	Black-topped pot rim. Pl. lxxiii, 152.	339	Part of 337.
3'	Ampullaria shell.	325	—	3' 6"	Rim of red and black bowl. Pl. lxxiii, 155.	340*	Horizontally burnished red exterior; highly polished black interior; incurved rim. The sherd must belong to the class of shallow open bowls such as Corpus F 15d. The class is essentially Early Predynastic, not later than s.d. 40. Compare with plan 293.
3'	Oval clay object. Pl. lxxii, 134.	326	About 7 cm. long, with oval section; appears to represent the body of a female figure, breasts are clearly indicated. Same type as plan 330.	3' 6"	Oval scraper. Pl. lxxxi, 112. Pl. lxxiii, 164.	341	Length 3.6 cm. Upper-face formed of two anticlinal flake-scars, separated by flake-ridge. Delicate retouch at end and one lateral edge. Plain back with bulb.
3'	Child's mud vase. Pl. lxxvii, 23.	327	About 3 cm. high; unornamented.	3' 6"	Carinated core scraper. Pl. lxxxi, 117. Sickle-flint. Pl. lxxxi, 116. Pl. lxxiii, 158.	—	—
3'	Sickle-flint. Pl. lxxxi, 100.	328	Length 10 cm. Pointed and oblique-ended type. Friction polish on worn serrations. Black edge intermittently battered.	3' 6"	Trimmed blade. Pl. lxxxi, 114.	342	Length 8.5 cm. Obliquely trimmed ends. Friction polish on serrated edge. A few abrasions up back edge.
3'	End scraper on long blade. Pl. lxxxi, 87.	329	Length 10.3 cm., on a slightly concave flake, parallel-sided, with small bulb on under-face. Upper-face shows longitudinal flake-scars and ridges, with carefully trimmed narrow scraping end. No lateral retouch.	3' 6"		343	Length 8.6 cm. The upper face is made half of a longitudinal strip of white cortex, half of a single flake-scar running the length of the blade. The back edge is retouched. Cutting edge abraded. Secondary work on butt and curved tip. Plain flake under-surface with bulb removed.
3'	Pear-shaped clay object. Pl. lxxii, 135.	330*	Length 6.6 cm. Probably the same purpose as plan 326. In this case the body of the object is covered on both sides by incised lines running at all angles. In this, and general form, it recalls a Cretan figurine published by Evans, <i>J.R.A.I.</i> , Vol. LV, 1925, p. 217, Fig. 16, b1 and 2.	3' 6"	Badarian combed sherd.	344*	Black ware, combed outside only.
3'	Oval end scraper. Pl. lxxxi, 103.	—	Length 4.8 cm. on a flake; scraping end slightly "nosed." The butt is trimmed in a pseudo-burin fashion, but does not form a true graver. Strip of cortex up one margin. (Ashmolean.)	3' 6"	Small Badarian trimmed blade. Pl. lxxxi, 115. Pl. lxxiii, 160.	345	Length 6 cm., in smoke-grey chert. The upper-face shows two anticlinal flake-scars and central flake-ridge. The back edge and oblique tip and butt are retouched. A small patch of orange-coloured crust remains. Plain bulb under-face, the bulb having been at the tip end, but removed by retouch.
3'	Thin flint disk. Pl. lxxx, 82.	331	Diam. about 3.7 × 3.3 cm. Fine edge trimming, plain bulbar under-face.	3' 6"	Sherd with incised herring-bone pattern. Pl. lxxiii, 148. Small pointed blade. Pl. lxxxi, 113. Pl. lxxiii, 159.	346*	(a) Similar to plan 110 (A 5. 3' 6"), and two pieces inside hut circle 248.
3'	Small double end and side scraper. Pl. lxxx, 76.	332	Length 3.6 cm. Upper-face steeply retouched at one scraping end; more gradually the other. Alternate retouch on side edges. Plain under-face with bulb removed.	4'	Small carinated core scraper.	347	—
3'	Double end and side scraper. Pl. lxxx, 81.	333*	On a flake 6 cm. long. Alternate lateral retouch. Plain under-face with truncated bulb.	4'	Small Badarian trimmed blade. Pl. lxxxii, 132. Pl. lxxiii, 192.	348*	(b) Length 8.7 cm., in yellow opaque chert, pressure-flaked all over. Shallow basal notch as though for hafting. Abraded cutting edge; sand polished.
3' 6"	White-cross-lined sherd. Pl. lxxiii, 146.	334*	The design may represent oars of a boat, as bowl in J. de Morgan's <i>Recherches sur les Origines de l'Egypte</i> , pl. ii, fig. 5.				
3' 6"	Badarian sherd. Pl. lxxiii, 157.	335	Red-polished, uncombed exterior, black interior. A keel renders its inclusion in Badarian wares necessary.				
3' 6"	Black-topped pot rim. Pl. lxxiii, 151.	336*	Corpus type B 76a. s.d. 35-46.				
3' 6"	Black-topped pot rim. Pl. lxxiii, 153.	337*	Well-moulded rim of Corpus type B 53b. s.d. 33-75. Part of no. 339.				

DISTRIBUTION LIST

LIST OF ABBREVIATIONS

Ab. . Aberdeen.
 Bel. . Belfast.
 Bex. . Bexhill.
 B.Mus. . British Museum.
 Bolt. . Bolton (Chadwick Mus.).
 Bost. . Boston (Lincs.).
 Bris. . Bristol.
 Brus. . Brussels.
 Car. . Cardiff.
 Cairo, with *Journal d'Entrée* numbers.
 Cam. . Cambridge (Ethnological).
 Cop. . Copenhagen (National).
 Dun. . Dunedin.
 Edin. . Edinburgh (Royal Scottish).
 Fitz. . Fitzwilliam (Cambridge).
 Ky. . Kyoto University.

Lich. . Lichfield.
 Man. . Manchester University.
 Newc. . Newcastle.
 Ox. . Oxford (Ashmolean).
 Pitt. . Pitt-Rivers (Oxford).
 Ply. . Plymouth.
 Read. . Reading.
 Res. . In reserve at U.C.
 Roch. . Rochdale.
 Tok. . Tokyo University.
 U.C. . University College (London).
 Worth. . Worthing.

Type 1 and Type 2 are the main sets of Badarian objects, one of which is destined for the British Museum, and the other for University College, London.

1. Lich.	131. Ky.	215. Brus.	1643. Ky.	1716. Dun.	2094. U.C.
2. Lich.	132. Ky.	216. Ky.	1645. Fitz.	1741. U.C.	3002. Dun.
3. Pitt.	134. Ply.	217. Ab.	1646. Ky.	1743. B.Mus.	3149. Bolt.
101. Hull.	135. Hull.	222. Ky.	1647. Ky.	1752. Bolt.	3165. Cairo.
102. Roch.	136. Man.	223A. U.C.	1649. U.C.	1756. B.Mus.	48297-323
103. Bolt.	138. U.C.	569. Type 1.	1655. U.C.	1772. Dun.	3167. U.C.
104. U.C.	139. Man.	569A. Type 1.	1657. Newc.	1773. Man.	3177. Roch.
105. Man.	140. Ky.	1411. Type 2.	1659. Ky.	1777. Hague.	3197. Newc.
107. Lich.	141. Bolt.	1414. Type 1.	1660. Dun.	1787. U.C.	3284. Man.
111. Lich.	143. Cairo.	1416. Type 1.	1664. U.C.	1790. Hull.	3507. U.C.
112. Pitt.	47611	1502. Res.	1665. U.C.	1902. Ky.	3608. Hague.
113. { Ky.	144. Bris.	1503. Ab.	1666. Ox.	1903. Dun.	3609. Bolt.
113. { Cairo.	145. Ky.	1504. Ky.	1670. U.C.	1967. { Bolt.	3701. Cairo.
113. { 47612-3	146. Ky.	1513. U.C.	1673. Cairo.	1967. { Hull.	48279
117. Ply.	151. Ky.	1517. Ky.	48281-3,	2015. Type 2.	3704. Dun.
119. Ab.	152. Bris.	1519. Man.	48324	2063. Read.	3705. Bolt.
120. U.C.	153. Ky.	1524. Ply.	1677. Hull.	2064. Ky.	3707. Res.
121. Ply.	154. Ky.	1534. Ky.	1681. Cairo.	2065. U.C.	3708. Worth.
122. U.C.	161. Ab.	1579. Bolt.	48330	2070. Read.	3710. U.C.
124. Ky.	203. Ply.	1604. U.C.	1683. U.C.	2074. U.C.	3714. Bex.
125. Ky.	205. Lich.	1606. U.C.	1690. Dun.	2075. Hague.	3715. Ky.
126. Ky.	210. Roch.	1624. Lich.	1702. Ky.	2078. Dun.	3718. Bolt.
127. Res.	212. Ply.	1629. U.C.	1713. Ox.	2085. Hague.	3720. Bost.
130. Pitt.	213. Roch.	1630. Bris.			

3721. Man.	3827. Hull.	5103. Man.	5285. Ox.	5427. Type 1.	5728. Bolt.
3722. Read.	3828. Man.	5104. Type 1.	5290. Type 1.	5428. Man.	5729. Man.
3725. Ab.	3829. Newc.	5105. Type 1.	5294. Man.	5429. Type 2.	5730. Res.
3726. Newc.	3830. Lich.	5106. Type 1.	5342. Cop.	5430. Type 1.	5732. Type 2.
3728. Ab.	3831. Newc.	5107. Type 1.	5348. Res.	5431. Type 1.	5733. Hull.
3730. U.C.	3832. U.C.	5108. Type 1.	5350. Res.	5434. Bel.	5734. Man.
3731. {U.C.	3835. Dun.	5109. Type 2.	5351. Type 2.	5436. Type 1.	5735. {Ox.
3731. {Bex.	3836. Man.	5110. Type 1.	5354. Res.	5437. Car.	5735. {Type 2.
3732. Res.	3839. Newc.	5111. Type 1.	5356. Res.	5438. Type 1.	5737. Type 1.
3733. U.C.	3841. Newc.	5112. Type 2.	5357. Ox.	5441. Man.	5738. Ox.
3735. Hague.	3843. Bex.	5114. Type 2.	5358. Man.	5443. Bolt.	5739. Cairo.
3738. Res.	3844. Man.	5115. Type 2.	5359. Type 2.	5444. Man.	49264-73
3739. Worth.	3850. Edin.	5116. {Type 1	5362. Type 1.	5446. Type 2.	5740. Type 1.
3740. U.C.	3851. Dun.	5116. {B.Mus.	5364. Hull.	5448. Type 2.	5741. Man.
3742. {U.C.	3901. Hull.	5118. Type 1.	5365. Type 2.	5449. Type 1.	5742. Res.
3742. {Hull.	3902. Lich.	5119. Type 1.	5369. Man.	5452. Type 2.	5744. Type 2.
3744. Roch.	3904. Newc.	5120. Type 1.	5373. Ox.	5453. Ox.	5745. Type 1.
3750. Edin.	3905. Hague.	5124. Type 1.	5374. Type 1.	5457. Type 2.	5747. Ox.
3751. Bost.	3909. Res.	5125. Type 1.	5379. Type 2.	5458. Ox.	5750. Type 1.
3752. Man.	3910. Ply.	5126. Roch.	5381. Ox.	5459. Type 1.	5751. Tok.
3754. Hull.	3911. Dun.	5127. Type 2.	5383. Man.	5461. Type 1.	5754. Man.
3755. Bost.	3912. Edin.	5128. Type 1.	5386. Man.	5470. Bel.	5755. Hull.
3758. Newc.	3914. Dun.	5129. Man.	5387. Roch.	5520. Type 1.	5758. Type 2.
3759. {U.C.	3915. Lich.	5130. Type 2.	5388. Res.	5548. Type 1.	5761. Man.
3759. {Ox.	3916. Bel.	5131. Type 1.	5389. Type 1.	5550. {Type 1.	5762. Type 1.
3759. {Bolt.	3919. Res.	5132. Type 1.	5390. Type 2.	5550. {Type 2.	5763. Hull.
3760. Bex.	3920. U.C.	5133. Type 1.	5391. Read.	5550. {Man.	5764. Bolt.
3762. Bost.	3922. U.C.	5134. Ky.	5392. Tok.	5550. {Ox.	5768. Ox.
3770. U.C.	3923. Lich.	5135. Man.	5393. Type 2.	5556. Type 1.	5769. Type 2.
3771. Man.	3924. Hague.	5136. Type 1.	5397. Ox.	5701. Newc.	5770. Res.
3802. U.C.	3932. Cam.	5140. Roch.	5398. Type 2.	5704. Roch.	5773. {Type 1.
3804. U.C.	4401. U.C.	5142. Ox.	5399. Cairo.	5705. Type 1.	5773. {Type 2.
3806. Bolt.	4601. Cairo.	5143. Type 1.	49261-3	5706. Type 1.	5773. {Read.
3809. Newc.	48274-5	5144. Type 1.	5402. Ox.	5708. Hull.	5773. {Bolt.
3810. Res.	4602. Ox.	5145. Type 1.	5403. Type 1.	5709. Type 1.	5774. Type 1.
3811. U.C.	4603. U.C.	5146. Man.	5405. Man.	5710. Ox.	5805. Type 2.
3812. Man.	4604. U.C.	5147. Type 2.	5406. Bolt.	5711. Ox.	5806. Man.
3813. Hague.	4605. Edin.	5148. Type 1.	5407. Man.	5712. Type 2.	5807. Man.
3814. Roch.	4606. Dun.	5149. Type 2.	5408. Bolt.	5715. Read.	5809. Type 2.
3815. Read.	4608. Ab.	5151. Type 1.	5409. Type 2.	5716. {Type 1.	5810. Ox.
3816. Bost.	4610. Newc.	5152. Type 2.	5410. Type 1.	5716. {Type 2.	5811. Type 2.
3819. Read.	4615. Man.	5155. Type 1.	5411. Type 1.	5716. {Bolt.	5814. Type 2.
3820. Lich.	4616. Lich.	5163. Type 1.	5412. Cop.	5717. Hull.	5816. Newc.
3822. Ky.	4621. Ky.	5164. Type 1.	5413. Cairo.	5718. Type 2.	5818. Tok.
3823. {U.C.	4622. {U.C.	5165. Cop.	49259-60.	5719. Type 2.	6002. Type 1.
3823. {Ox.	4622. {Ox.	5213. Type 1.	5414. Res.	5720. Man.	6005. Type 1.
3823. {Cam.	4622. {B.Mus.	5222. Man.	5416. Man.	5721. Man.	6006A. Man.
3823. {Man.	4623. Edin.	5224. Ox.	5417. Bolt.	5722. Hull.	6014A. Type 1.
3824. Dun.	4801. Res.	5225. Type 2.	5418. Man.	5723. Type 2.	6018. Type 2.
3825. U.C.	4803. Type 1.	5227. Type 1.	5419. Type 2.	5725. Type 2.	6021. Type 2.
3826. {U.C.	4810. Type 2.	5228. Type 1.	5425. Man.	5726. Type 2.	
3826. {Worth.					

Cemetery 000.

Slates : Lich.(2).

Cemetery 100.

100-2. Shells : Hull

100-3. Beads : Ab.

100-4. Beads : Bolt.

100-5. Beads : U.C.

100-6. Beads : Ky.

100-7. Beads : Roch.

100-8. Beads : Lich.

Pottery, female figure : U.C.

Pottery : Ky.(3), U.C.

Limestone vase : Ply.

Slates : Lich., Ply.(2).

Shells : Hull.

Shell bangles : Lich.(2).

Disk mace : Hull.

Pottery whorl : Hull.

Flint flakes : Ply., Pitt.(4).

Flint knife : Pitt.

Pebble : Pitt.

Cemetery 200.

Pottery : Bruss., Lich.(2), Ply.(2).

Beads : Bolt.

Cemetery 400.

Pottery : Type 2(2).

Slate : Type 2.

Arrow-head : Ky.

Flint knife : Pitt.

Cemetery 1100.

Celt : U.C.

Cemetery 1400.

Pottery : U.C.(2), Pitt.

Cemetery 1500.

Pottery : Roch.

Beads : U.C.

Mace : Hull.

Slates : Ab., Hull.

Tags : Ky.

Limestone vase : Lich.

Flakes : Pitt.

Cemetery 1600.

Pottery : Hull., Dun.

Potmark : U.C.

Slates : Lich., Bel., Bost.

Fish-tailed flint : Bolt.

Flakes : Pitt.

Cemetery 1700.

Pottery : U.C.(2), Bolt., Man., Ox.

Potmark : U.C.

Oval mace : Man.

Alab. pendant : Cairo (48333).

Stone vases : Newc., Bel.

Bone harpoon : U.C.

Flint knives : Dun., U.C., Type 1.

Shell bangles : Hague(3), Worth.

Slates : Lich., Read., Bost.(2).

Cemetery 1800.

Pottery : Bex., Dun.

Area 1900.

Pottery : Man.

Potmark : U.C.

Arrow-head : Man.

Saw flint : Car.

Stone pounder : Ab.

Stone grinder : Bex.

Area 2000.

Pottery : U.C.(2), Roch.

Pottery lamp : U.C.

Potmark : Bolt.

Stone grinder : Ab.

Area 2100.

Stone quern and grinder : Roch.

Area 3000.

Pottery : Dun.

Kiln bricks : Newc., Ab., Ky., Cam.

Alab. rubber : U.C.

Area 3000-3.

Pottery : U.C.(4), Dun., Read., Worth.

Sherd with man : B.Mus.

Potmark : U.C.

Fish-tailed flint : U.C.

Quartz mace : U.C.

Pottery whorl : U.C.

Area 3000-6.

Pottery : U.C.(2), Hull.

Flat alab. rubber : U.C.

Shell : U.C.
 Clay figure : U.C.
 Stone whorls : Ky.
 Saw flints : Car., Type 1.
 Flint knife : Type 2.
 Flints : Cairo (48285-96).

Area 3200.

Pottery : Dun.
 Stone whorl : Ky.
 Celt : U.C.
 Limestone stopper : Man.

Area 3300.

Pottery : Ox.

Area 3400.

Stone grinders : Bolt.(2), Ab.

Cemetery 3700.

Pottery : Newc.(3).
 Beads : Edin.(3).
 Stone vases : Newc.(2).
 Pottery boat : U.C.
 White-incised pot : U.C.
 Slate : Dun.
 Fish-tailed flint : Dun.

Cemetery 3800.

Pottery : Dun.(2), Newc., Edin., Ky., Hague(4),
 Hull, Bel., Worth.(2), Ply., Lich., Man.
 Unfinished squat pot : U.C.
 Beads : U.C., Edin.
 Stone vases : Lich.
 Limestone stopper : Man.
 Disk mace : Newc.
 Slates : Newc., Dun., Worth., Bex.
 Fish-tailed flint : Ky.
 Shell bangle : Ply.
 Copper hook : Ky.

Cemetery 3900.

Pottery : Newc.
 Potmark : U.C.
 Shells : Hull(2).
 Slate : Hull.

Area 4200.

Stone pounder : Read.

Cemetery 4600.

Pottery : U.C., Dun.

Cemetery 4800.

Pottery : Type 2.

Cemetery 4900.

Ship pot : Ky.

Cemetery 5100.

Pottery : Type 1(2), Type 2, Ox., Cairo(48325).
 Stone vase : Type 1.
 Ear-studs : Cairo (48328-9).
 Thin stone rubber : U.C.
 Slate : Cairo (48326).
 Scrap of throw-stick : Type 1.
 Shells : Type 1.
 Pottery boats : Type 1(2).
 Flint : Type 1.
 Flint flakes : Type 1(25).
 Arrow-head : Cairo (48327).

Cemetery 5200.

Pottery : Cop., U.C., Type 1, Type 2(2), Ox.,
 Res.
 Arrow-heads : Ox., Type 1.
 Flints : Type 1(3).
 Celt : U.C.
 Pottery whorls : U.C.(2).
 Shell : Type 1.

Area 5300.

Pottery : Type 1.
 Shells : Man.(3).

Area 5400.

Pottery : Type 1(2), Newc., Tok., Type 2.
 Stone rubbers : Man., Type 1, Ox.
 Ear-studs : Man., Ox., Type 1, Type 2.
 Bone awl : Ox.
 Bone flintworker's tool : Type 1.
 Pottery whorl : Ox.
 Flint knives : Read.
 Arrow-heads : Roch., Type 1.

Area 5500.

Pottery : Type 1(4), Man.(2), Ox., Type 2(2).
 Bone flintworker's tool : Type 2.
 Stone rubbers : Bolt.(2).

Shell : Man.
Arrow-head : Read.
Flint scraper : Type 1.
Leaf flint : Type 1.
Oval flint : Type 2.
Ear-stud : Type 2.

Area 5600.

Bone awl : Man.
Pottery : Res.
Flint scraper : Type 2.

Cemetery 5700.

Shells : Hull(5), Man.
Beads : Hull, Man., Type 2.
Smoky quartz : Type 1, Type 2, Ox., Man.
Piece of horn : Ox.
Pottery whorl : Ox.
Ear-studs : Ox., Type 1.
Saw flint : Type 1.

Cemetery 5800.

Pottery : Type 1.

Cemetery 6000.

Pottery : Type 1.
Ivory bangle : Type 1.
Stone rubbers : Man.(2).
Pottery hippo : Ox.
Arrow-head : Car.

Not numbered.

Bone awl : Man.
Pottery : Type 2(3).
Stone rubber : Type 2.
Pottery boat : Ox.
Pottery ox horn : Ox.
Cylinder ear-stud : Type 1.

Hemamieh Village.

Stratified deposits : U.C. (Dept. of Applied
Statistics), Ox., Man.

INDEX

- Abaza Bey, Mahmud, 38, 63
 Abusir el Meleq, rippled pots from, 26
 Abydos, 70, 71, 81, 93, 94
Acacia sp., 95
 A-Group, 82
 Aitken, Mrs. G. B., 1
 Amratian period, 1, 74, 75
 Amuletic combs, Pre., 58
 Amulets, Badarian, 27, 42
 Predynastic, 55, 91, 98
 See Bull's head, Hippopotamus, Fly, Gazelle, Crocodile.
Ancillaria shells, Bad., 27, 38 ; Pre., 62
 Animal burials, Bad., 7, 12, 38, 42
 cemeteries, Pre., 92-3
 Animals as amulets, Pre., 59
 on Cross-lined pots, 54
 as potmarks, Pre., 55
 Antelope amulet, Bad., 27
 Arrow-heads, flint, Bad. :
 tanged, 5, 36, 39
 winged (or concave-based), 35, 39, 41
 Arrow-heads, flint, Pre. :
 barbed, 75, 78, 81
 concave base (or winged), 35, 61, 75, 78, 81, 96, 98, 107
 from elsewhere, 35
 leaf-shape, 75, 113
 sequence in N. Africa, 75
 tanged, 62
 Ashmolean Mus., 3
Asphodelus seeds, 62
Astericus graveolens, 86, 104
 Attitudes of bodies, Bad., 18
 Pre., 53
 Awls, bone, Bad., 33, 41
 Pre., 60. *See* Bone articles.
 copper, Pre., 60
 Bach, Mr. C. H. G., 1
 Badari town, 1, 69, 74
 Badarian, meaning and use of term, 1
 Bardarian sites at Qau, 1
 Badarians, references in Part II :
 agricultural evidence, 76, 96
 arrow-heads, 75, 95, 96
 cemetery, 70, 74, 75, 76
 combed pottery, 70, 74, 76, 77, 83, 85, 86, 87, 88 ; and Inventory, 95-102, 106-113, 115, 116 ; beneath breccia, 72, 73, 106, 108, 110, 113, 116 ; designs on, 74, 75, 102, 107, 108, 113
 connexion with Amratian, 74, 75
 flint work, 75 et seq.
 beneath breccia, 72, 108, 113, 116
 pressure flaking, 76, 83, 99, 102, 103
 push-planes, 75, 76, 96, 108, 111, 112, 113
 sickle-flints, 75, 77 ; differ from later type, 77
 small knives of dark chert, 76, 77, 85, 87 ; and Inventory, 96, 101, 107, 111, 112, 114, 115, 116
 homogeneity of, 70, 74
 original discovery of, 70
 relative dating, 73, 74, 75, 78, 79, 87
 Ballas, 81, 94, 104
 Basalt vases, Bad., 5, 7, 28, 41 ; Pre., 57
 Basket coffin, Pre., 53
 Basketry in pot, 106
 Baskets, Bad., 34
 as pot lids, 24
 making, 41
 Pre., Miss W. Blackman on, 63
 materials, 63
 Bate, Miss D., 94
 Bates, Mr. Oric, 28
 Beads, Bad., 27, 28
 Mr. Beck's report on, 56
 belts, 28, 40
 forms, 27
 how threaded, 28
 how worn, 27, 40
 inlaid, 28
 large single, 40
 materials, 27
 piercing, 41

- Beads, Pre., 56
 Mr. Beck's report on, 56
 forms, 56
 materials, 56
 piercing, 56
 Beads from Hemamieh Settlement :
 blue glaze tubular, 91
 carnelian barrel, 91
 disk, 90
 crumb, 91
 egg-shell, 91
 green glaze tubular, 90
 ivory cylindrical, 91
 limestone disk, 97
 steatite lentoid, 90
 white glazed, 91
 Beaker-shaped pots, 3", 5 ; 23", 41
 Beck, Mr. H. C., 56
 Bêt Khalláf, 80, 82, 88
 B-Group, 82
 animal burials, 42
 beads, 27
 Biers, Bad., 20
 Bins, mud, Bad. (for grain ?), 5, 6", 21, 41
 Black incised pottery. *See* Beakers
 Blackman, Miss W., 63
 Boards in Pre. graves, 53
 Boats, clay model, Bad., 7, 34
 Pre., 61, 102, 108
 Bodkin, bone, Pre., 60
 Bone articles :
 awls, 97, 99, 106, 107, 111, 112. *See* Awls
 harpoon, 106. *See* Harpoons
 needle, 103. *See* Needles
 pins, 106, 107. *See* Pins
 tubes, 77, 109, 114
 Bowls, game, Pre., 60
 Bows not found, 41
 Bracelets, Bad., 30, 41
 Pre., 58
 Branches on bowls, 22
 Bread, Bad., 41 ; Pre., 63
 Breccia :
 archaeological associations, 70, 73, 74, 84, 85, 87, 88
 formation of, 72, 73, 74
 nature of, 72
 British Museum, 93
 Bucrania, 92
 Bull's head amulets, Pre., 55, 108
 Burials at Hemamieh Settlement :
 cist, 89, 102
 contracted, 86, 91
 early undated, 91
 Old Kingdom, 71, 78, 83, 84, 85, 89 et seq., 92,
 93 ; and Inventory, 101, 103-10
 Burnishing of pottery, Bad., 21
 Button seal, 90, 92

 Cairo Museum, 80, 91
 Calcite crystals, 35, 87, 96
 "Carinated" bowls, 22, 26, 28, 39, 74, 75
 Carpenter, Dr., 38
 Castor plant, 38, 41
 Cat remains, 94
 Cedrus wood, Pre., 62
 Celts, Bad., 3, 13, 36, 39, 41. *See* Flints from
 Hemamieh
 Cemeteries, position of, 42, 48
 Cereals, 41
 Chert :
 black, 76
 nodular orange crusted, 75, 76
 tabular white crusted, 75, 77
 Chert-bearing limestone boundaries, 75
 Cinnamon bark, 63
 Class AB pottery, 22
 B pottery, 53
 BB pottery, 21
 BR pottery, 22
 C pottery, 54
 D pottery, 54
 F pottery, 53
 MS pottery, 22
 P pottery, 53
 PR pottery, 22
 R pottery, 55
 RB pottery, 23
 SB pottery, 23
 T pottery, 55
 Classification of pottery, 21
 Claw amulet, Pre., 56
 Climate, different, 40
 Cloth wrappings, Bad., 19
 Clothing, Bad., 40
 Coffins, Bad., 20
 Pre., 53
 Combs, hair, Bad., 30, 41
 Pre., 58
 for pottery, Bad., 20, 30
 Conus shells, Bad., 27, 38
 Pre., 62
 Cooking-pots, Bad., 24, 39

- Copper beads, Bad., 27 ; Pre., 56
 borer, Bad., 33, 41
 in Hemamieh Settlement, 77, 81, 95, 101, 103, 107, 108, 111 ; none in Badarian strata, 8
 needles, Bad., 33
 pin, Bad., 7, 33 ; Pre., 60
 traded ?, 41
 Coral, Bad., 35 ; Pre., 50, 56, 63
 Cord, 96, 99
 Corvine bird, 106
 Cowries, Pre., 62
 Crab's claws, Pre., 63
 Crescent amulet, Pre., 56
 Cretaceous rocks, 75
 Crete, incised plant designs, 74
 rippled pottery, 74
 Crocodile, 40, 41
 amulet, Pre., 55, 56
 plates, Bad., 34
 Crystal beads, Pre., 56
 flakes, Bad., 6
Cupressus wood, Pre., 62
 Cups of pottery, Bad., 22, 39
Cyperus tubers, 63
Cypraea shells, Pre., 62

 Decoration on bowls, 22, 23, 25
 Delta, 70
 De Morgan, M. J., 80
Dentalium shells, 56
 Diospolis Parva, 92
 Disks, bone, 103
 pottery, Bad., 34
 Pre., 61, 85, 103, 107, 114
 Dismemberment, not observed, 19
 Dog burials, 42, 94
 Dolls, clay, 100, 106, 115. *See* Human figures
 Dôm fruit, 63
 Donne, Miss I., 1
 Dotted patterns, 54
 Drilling of stone beads, 27, 41, 56
 Droop, Prof. J. P., 11

 Ear(?) -studs, Bad., 30, 41
 El Amrah, 82, 89
 stone vases from, 28
 El Khez Canal, 1
 Emmer wheat, 63. *See* Grain
 Engelbach, Mr. R., 1
 Eolith, 86
 Etmanieh, 1. *See* Qau el Kebir

 Face in chert, 108
 Facetted beads, Pre., 56
 Faience, no Badarian, 27, 39
 Pre., 56
 Fayum :
 arrow-heads, 75
 levels, 80
 middens, 74, 94, 97
 sickle-blades, 75, 77
 Figurine in chert, 98
 Finger-rings, Bad., 30
 Pre., 58
 Fish-bones, 86
 -hooks, 41
 -pit, 94, 105
 -spines, 33
 -vertebra, 30
 Flax, identified, 63, 67
 Fints, Bad., 35 et seq.
 Pre., 61 et seq.
 flakes, Bad., 37
 Pre., 62
 use of, 37
 Flints from Hemamieh Settlement :
 awls, 77, 96, 100, 106, 110, 111
 Badarian. *See* Badarian
 bifacial cores, 97, 100, 102, 108
 celts, chipped, 77, 95, 114
 ground, in Nubia, 82
 core industry of lower levels, 75
 correlation with pottery, 70, 75, 76
 disk-shape, 96, 97, 115, 116
 fish-tail knives, 77, 96, 107. *See* Forked lance-heads
 flake industry of upper levels, 75
 Font-Robert type, 77
 knives, various, 75, 78, 86, 88 ; and Inventory, 96, 98, 99, 103, 104, 109, 110, 112, 114
 leaf-shape flakes, 78
 microlith, 114
 scrapers :
 carinated, 85 ; and Inventory, 95, 96, 99-102, 107-10, 112, 115, 116
 circular, 75-8, 85 ; and Inventory, 97, 99-102, 104, 108, 109, 111, 112
 core, Inventory, 96, 101, 106, 108, 113, 115
 end, 73, 75, 77, 78, 87, 88, 90 ; and Inventory, 95, 97-100, 102-9, 111, 112, 114-16
 notched, Inventory, 106, 107, 114
 ovate, 75, 76, 78, 87 ; and Inventory, 101, 103, 105, 107-16

- Flints from Hemamieh Settlement—*continued*.
 shouldered flakes, Inventory, 97, 103, 115
 sickle-blades, 77, 78, 85; and Inventory, 95-101,
 104, 109, 111, 113-15
 small blades, Inventory, 96-9, 101, 105, 109,
 110, 115
 tanged flakes, 95, 106
 tortoise-core, 116
 Flint-working tools (?), 33
 Floods from high desert, 2
 Fly amulets, Pre., 55
 Food, Badarian, 41
 Forehead pendant, Pre., 59
 Forked lance-heads, flint, Pre., 61
 Fossil-wood object, 102
 Fox, Pre., 58. *See* Jackal
 Frog (?) on spoon, Bad., 31
 Fuel, 73, 82, 95, 106
 storage of, 82, 83
 Fur garments, Bad., 40

 Galena, 31
 Games, Pre., 60
 Garstang, Prof., 81, 82, 88
 Gazelle, 2
 amulet, Bad., 27, 42
 -bone awls, 97, 107
 on pin, Pre., 58
 on spoons, Bad., 31
 Gebel Tarif, 28
 Gehena, tribe, 55
 Gerzean period, 1
 Gilban seeds, 63
 Glaze beads, no Badarian, 27, 39
 Goats, 41, 77
 burials, 42, 92
 skin, 53, 89
 Grabham, Mr. G. W., 55
 Grain, 71, 77, 85, 102
 grinders, Bad., 34. *See* Mealing stones, Rubbers
 parching kilns, 81. *See* Kilns
 Granite, grey, ball, 107
 pink, ball, 114
 Graves, Bad., 18
 Pre., 52
 Gray, Mr. Terence, 1
 Gurob, 94

 Habab, tribe, 42
 Hair, dressing of, Bad., 20, 41
 -pins, Pre., 58, 101

 Hair, varieties of, Bad., 20
 Hammer-stones, flint, 96, 99
 quartz, 109, 112
 Hamper coffins, Bad., 20
 Handles to pots, 24, 55
 Harpoons, Pre., 54, 60. *See* Bone articles
 Hartebeeste amulets, Pre., 59
 Head missing, Bad., 19
 Hearths, 71-3, 81-4, 86, 87, 94; and Inventory,
 96, 97, 99, 100, 102, 105, 106, 108, 110, 113
 Hemamieh, cemeteries, 2, 4, 43, 49, 69, 77
 cliffs, 69, 74
 village, 69, 70
 Hickson, Prof., 38
 Hierakonpolis, rippled pot from, 26
 Hippopotamus, 40
 amulet, Bad., 27, 42
 Pre., 59, 102, 103
 pot, Pre., 54
 ? in pottery, Bad., 6, 34
 tusks, Bad., 34
 Hooks, bone or shell, Bad., 33
 Pre., 59, 60
 Horn, for snuff (?), Pre., 60
 Horns of animals, Bad., 34
 Hour-glass bead, Pre., 55
 Houses, Bad., 40
 Human figures, Bad., 28
 Pre., 60. *See* Dolls, Figurine
 Hume, Dr. W. F., 73
 Hunt, Dr. E. H., 89
 Huts, Bad., 40
 Pre., general description, 44, 47, 48, 82 et seq.
 material, 82
 rectangular pottery model, 82
 relative age, 77, 83-8
 stratigraphical position, 76, 92
 traces at Abydos, 81

 Ibis Cemetery, 93
 Incised pottery. *See* Pottery
 Ivory, imported (?), 41
 combs. *See* Combs
 pins, 103, 105. *See* Pins
 vases, Bad., 28

 Jackal burials, Bad., 42. *See* Fox
 Jackson, Mr. W., 38
 Jar stopper, 86
 Juniper wood, Pre., 62, 101

- Kaborai*, Sudanese pot, 55
 Kilns, Pre., 45
 Lamps, Bad., 41
 Pre., 61
 Lance-heads, flint, Pre., 61
Lathyrus seeds, 63
 Leather-work, Bad., 41
 Lids to pots, Bad., 24
 Limestone slabs, 83, 87, 90
 Linen, 64 et seq.
 Linseed, 111
 Loat, Mr. L., 92-4
 Loom figured on dish, Pre., 54
 Lucas, Mr. A., 63
 Mace, Mr. A. C., 82
 Mace-heads, Pre., 58
 biconical, 83, 99, 101
 disk, 81
 pear-shape, 105
 Maḥasnah, 31, 36, 39. *See* Bêt Khalláf
 Malachite, 31, 41, 85-7; and Inventory, 99, 102,
 103, 109
 grinding pebbles, 34, 87, 112
 Males, segregated (?), 19
 Manchester Museum, 71
 Marbles, Pre. game, 60, 98, 103
 Mat-making, 41
 Matting in graves, Bad., 18, 39; Pre., 53
 Mr. Midgley's report on, 66
 Mealing stones, 97, 98. *See* Grain grinders, Rubbers.
 Meals at grave-side, 9, 42
 Meris-Markos. *See* Nubia
Mesenu or *Mesentiu*, 54
 Midgley, Mr. Thos., 64
 Milking-vessels, 58
 Mirrors (?), 3, 35
 Mud bins. *See* Bins
 coffins, Pre., 53
 Multiple burials, not observed, 19
 Murray, Mr. G. W., 93
 Naqada, rippled pots from, 26. *See* Ballas
Natica shells, Bad., 27, 38
 Pre., 62
 amulets, Pre., 55, 56
 Netting(?) -hook, copper, Pre., 60
 Ninepins, game, 36
 Nomads, Badarians not, 42
 Nose-stud, Bad., 10, 30, 41
 Nubia, archaeological survey, 81, 82, 92
 Badarian culture in, 40, 41
 beads from, 27
 Middle Nubian ware, 93
 pottery, 1, 25, 40
 rippled pots from, 26
 Obsidian, 50, 56
 Ochre, 35; and Inventory, 95, 97, 98, 105
 Old Kingdom, deposition of scree since, 72
 graves avoid breccia, 72, 85
 human burials. *See* Burials
 sacrificial animals. *See* Ox
Oliva shells, 27, 38
 Ostrich, 40
 egg, 3, 28
 feathers, 28, 38
 on pin, Pre., 58
 Ox, 40, 41
 bones, 77
 burials, 42
 sacrificial stacks, 85, 91 et seq.; and Inventory,
 105, 106
 stratigraphical position, 85, 89, 92
 Palestine, 75
 Palettes, shell, 95
 prophyry, Bad., 35
 slate, Bad., 30, 39
 from elsewhere, 31
 not pierced, 31
 position of, 31
 sequence of, 31
 use of, 31
 Pre., 58, 81; and Inventory, 97, 98, 100, 102,
 105
 Pan-graves, 74, 92
 cemetery, 10, 13
 pottery, 21
 shells, 27
 Pebble polishers or grinders, 34
 Peet, Prof. E. T., 71, 81, 93, 94
 Pendant on forehead, Pre., 59
 Percival, Prof. J., 63, 85

- Physical characteristics of Badarians, 20
 Pig bones, 77, 85, 86
 Pins, bone, Bad., 33
 Pre., 60. *See* Bone articles
 copper, Bad., 33
Pinus wood, Pre., 62
 Planks in graves, Pre., 53
 Plaster floors, Pre., 44, 47
 Porphyry, 83, 97
 slabs, Bad., 6, 35, 41
 Porridge, 41
 Potmarks, Badarian, not found, 24, 39
 Pre., 55. *See* Pottery
 Pottery, Bad., 20 et seq. *See* Badarian
 Pre., 53 et seq.
 in Badarian graves, 25
 buff, 85, 101, 105
 burnishing, 21
 classification of, 21
 Class AB, 22
 B, 53, 70, 73-7, 79, 83, 85-8; and Inventory,
 95, 96, 99, 105-8, 110-12, 114-16; con-
 nexions with Badarian, 74, 75
 BB, 21
 BR, 22
 C, 54, 70, 73, 74, 75-7, 79, 81; and Inventory,
 95, 110, 112, 115; connexions with Badarian,
 74, 75
 D, 54, 70, 73, 76-88; and Inventory, 95, 97,
 99, 100, 102-6, 108, 110, 111, 113, 114;
 designs on, 78
 F, 53
 L, 81, 82
 MS, 22
 P, 53, 72, 74, 76, 77, 79, 84, 85, 88; and
 Inventory, 96, 98, 101, 109, 110, 112, 113, 116
 PR, 22
 R, 55, 71, 78, 79, 81, 83-6, 89; and Inventory,
 97, 98, 100-2, 104, 109, 111, 114
 RB, 23
 SB, 23
 T, 55
 W, 77, 79, 81, 85, 86; and Inventory, 96, 102,
 107
 contents of, 25
 with varied contents, Pre., 46 (three)
 copied from leather, Bad., 23
 correlation with flints, 70
 decoration of, Bad., 22, 23, 39
 dynastic, 90, 91
 everted rims, Pre., 53
 Pottery, few everted rims, Bad., 24, 39, 53
 forms, Bad., 24
 from elsewhere, Bad., 25
 handles, Bad., 24
 incised herringbone, 76, 83, 85, 86; and Inventory,
 101, 110, 111, 115
 various, Inventory, 102, 110, 114, 115
 making, 41
 mending, ancient, 25
 milled edge, 21; and Inventory, 102, 108
 position in graves, 25
 potmarks, Inventory, 96, 99, 102, 105, 110, 114.
 See Potmarks
 resemblances of Badarian to Early Predynastic, 25
 rippling of, Bad., 20
 slip on, Bad., 21
 Predynastic, sites, 42
 use of term, 1
 Preservation of Badarian bodies, 19
 Protodynastic :
 flint knife type, 78, 98
 ivory cylinder, 69, 78
 linen, 89
 pot burials. *See* Burials
 Push planes. *See* Badarian flints
 Qau el Kebir, 1, 3, 69, 70, 74, 76. *See* Etmanieh
 Quartz, glazed, mace-head, 58
 smoky, 13. *See* Crystal
 Querns, 81
 Quibell, Mr. J. E., 81
 Racial types of Badarians, 20, 42, 67
 Randall-MacIver, Dr. D., 82
 Red ochre, 35
 Red paint on palettes, 3, 31
 Reeds, 104
 coffins, Pre., 53
 matting, 40, 67
 Registers, explanation of, 2
 Reisner, Dr. G. A., 81, 82
 Religion of Badarians, 42
 Resin, 35, 38
 Rippled pottery, first found, 1, 2
 knives, flint, Pre., 61, 77
 Rippling of pots, 20
 Roofing of graves, 18, 53
 Rope, Pre., 67
 Rubbers of hard stone, 34, 41. *See* Grain-grinders,
 Mealing-stones
 Rush matting, 40, 67

- Sand used ceremonially, 90
 Sandals, Bad., 40
 Sandal-wood bark, 63
 Saw-edged knives, Bad., 36
 Scree :
 denudation, 72
 deposition, 69, 72, 73, 86, 95
 Selenite, 3, 7, 35
 Selvedge to cloth, 65 et seq.
 Semainian period, 1
 Sequencing of pottery, 26
 Sexes, segregation of, 19
 Sheep, 41
 bones, 77
 burials, 42
 Shells, how worn, 27, 40
 identified, 38
 source of, 41
 very common, 27
 Ampullaria, 115
 Conus sp., near *textile*, 84, 107. *See Conus*
 Conus taeniatus, 97
 Fusus polygonoides, 98
 Natica sp., 105. *See Natica*
 Natica mamilla, 104
 Nile mussel, 97. *See Spatha*
 Murex ternispina, 112
 Vertagus asper, 101
 Sherds as pot-lids, Bad., 24
 Sickie-flints, Bad., 41
 Pre., 62
 Skins as wrappings, 19, 40
 Skulls, Bad., Prof. Petrie on, 67
 Slip on pottery, Bad., 21, 22
 Snuff (?), 60
 Social institutions of Badarians, 42
 Soul-houses, 6
Spatha shells, Bad., 31, 38
 Pre., 61, 62
 Spindle-whorls, 34, 77, 81, 88; and Inventory,
 97-101, 104, 106, 107, 109, 111, 114
 Spoons, ivory, Bad., 31, 41
 for snuff (?), Pre., 60
 Star amulet, Pre., 56
 Starkey, Mr. J. L., 1, 2
 Steatite beads, traded (?), 41
 Steatopygous figures, 29, 61
 Steindorff, Prof. G., 42
 Stoessiger, Miss B., 20, 67
 Stone vases, Bad., 28
 from elsewhere, 28
 Pre., 57
 unfinished, 58
 Store-holes, 87, 108, 110
 Stratigraphy, 70, 71, 72, 73, 79, 80
 Studs, ear(?)-, 30, 41
 nose-, 30, 41
 Swamps, 40
 Tags, bone, Pre., 59
 Tamarisk wood, Bad., 38
 Pre., 62. *See Wood stakes*
 Tatuings, 29
 Temple site at Badari, 44
 Textiles, 64 et seq.
 Theriomorphic vase, 105. *See Hippopotamus*
 Throw-sticks, Bad., 32
Tibn in pottery, 21
 Tomlin, Major, 38
 Tools, Pre., 60
 Tortoise-shell, 30
 Toukh, 80
 Trade, Bad., 41
 Turquoise, 41
 Tusks, Pre., 59
 University College, 71, 89
 Villages, Badarian, 5 et seq.
 Predynastic, 43 et seq.
 why on desert, 40, 48
 Wadi Hammamat, 70
 Walls on high desert, 40
 mud, 81, 84, 87, 110
 Wands, ivory, Bad., 32
 wood, Pre., 59
 Watson, Prof. D. M. S., 12, 38
 Wattle and daub, Pre., 44
 Weapons, Pre., 60
 Weaving, 41, 64 et seq.
 Wheat, 63
 White incised pottery. *See Beakers, Pottery*
 Whorls, stone, Pre., 61
 Wildebeeste, 54
 Wind-screen shelters, 81, 88
 Wood log. *See Acacia*
 stakes, 81, 83, 85, 86, 88, 99
 Wrappings of Badarian bodies, 19; Pre., 53
 Yeast, 63

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN



The Spurlock Museum
College of Liberal Arts and Sciences
600 South Gregory Street
Urbana, IL 61801

telephone 217-333-2360 • fax 217-244-9419
url <http://www.spurlock.uiuc.edu>

Handwritten signature in red ink.

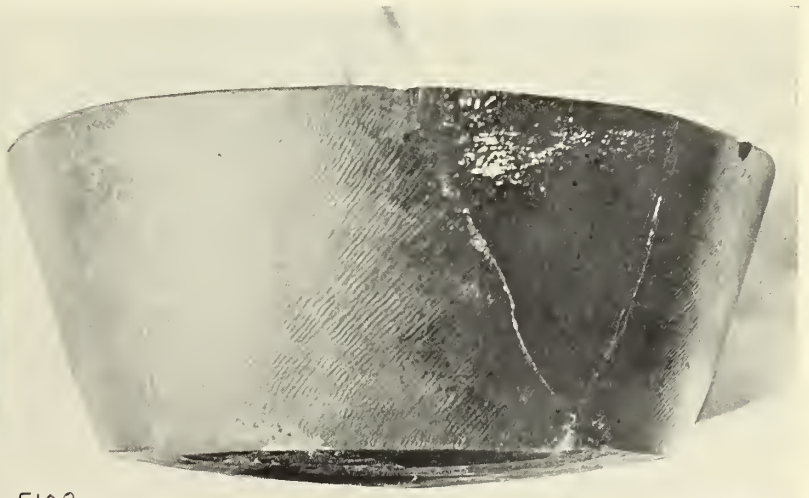




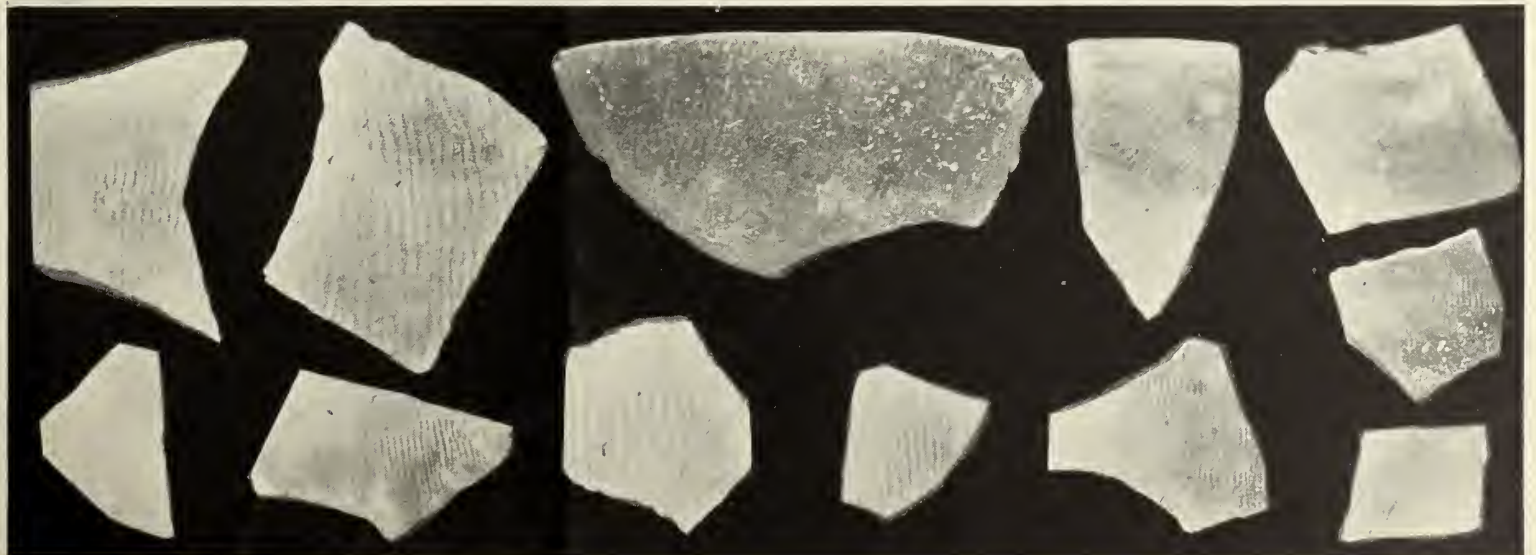
BADARIAN RIPPLED POTTERY



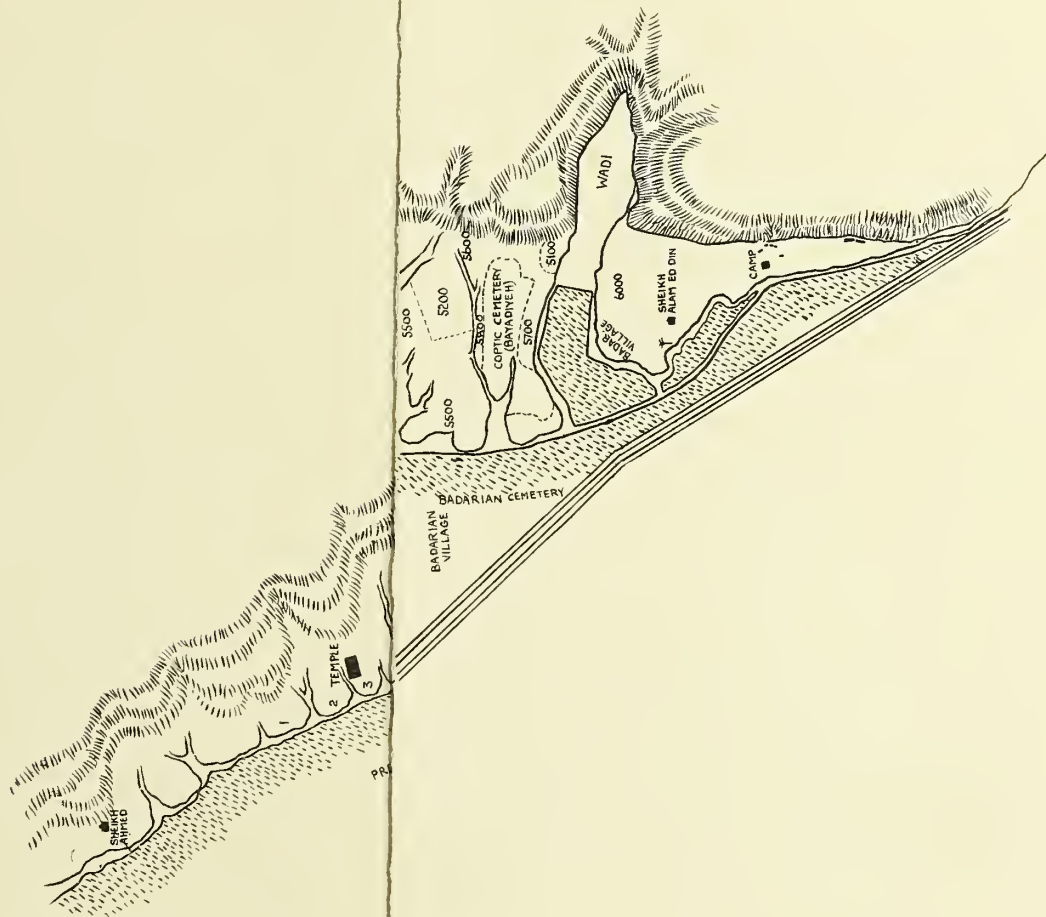
1414



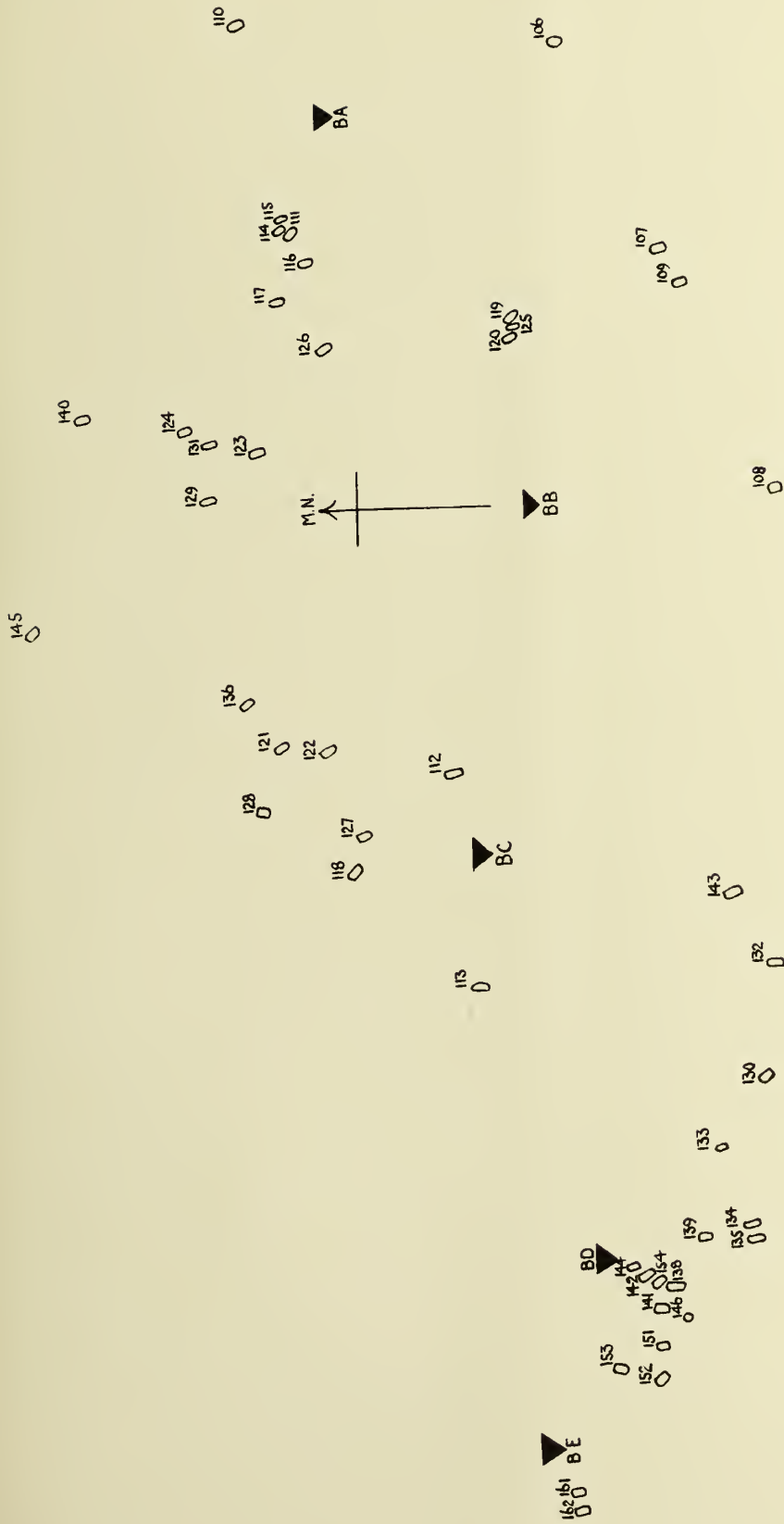
5108



Library
of the
UNIVERSITY OF ILLINOIS

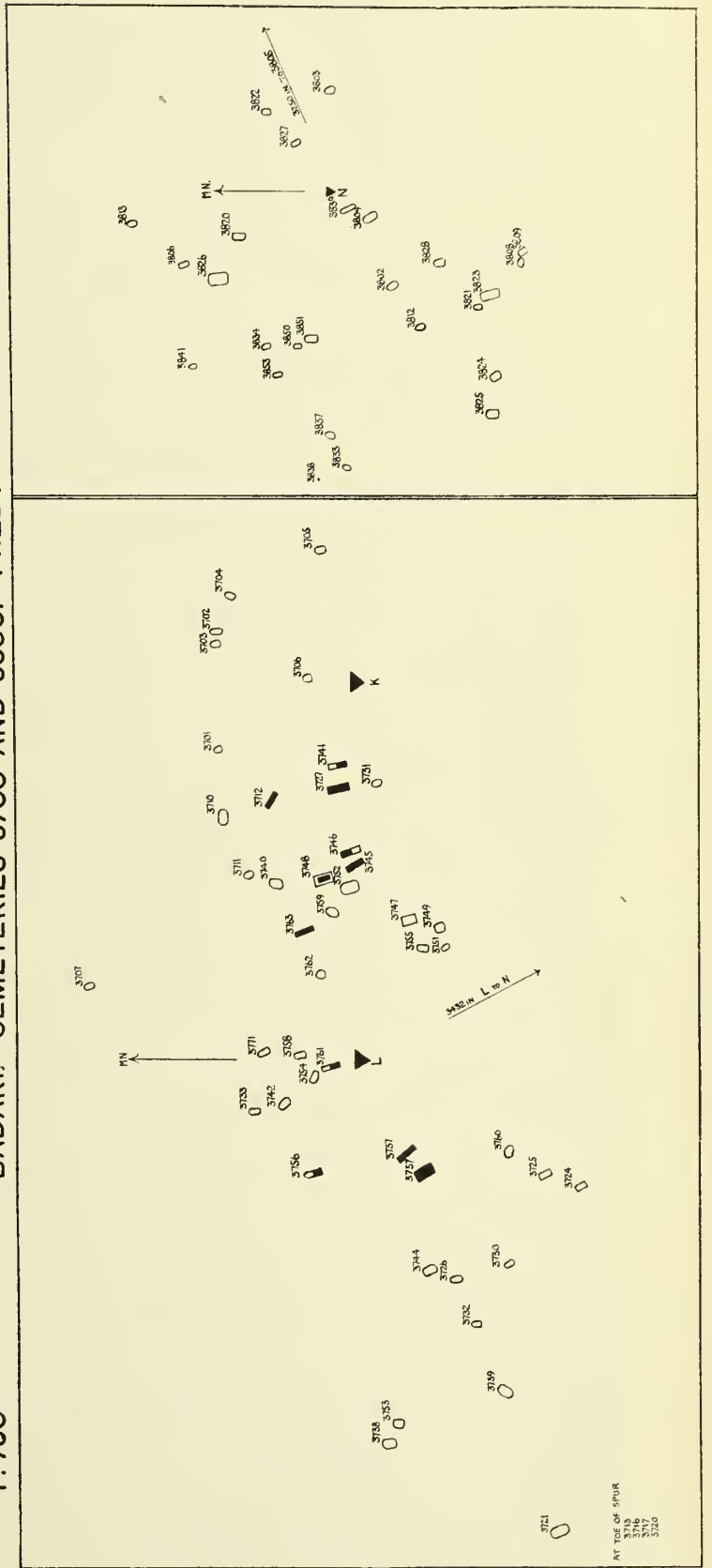






BADARI. CEMETERIES 3700 AND 3800. PREDYNASTIC.

1:750



AT THE OF SPUR
3700
3701
3702
3703

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

SEE QAU AND BADARI, VOL. III.

5478
○

5468
○ 5460
○

5476
○

27
66 5467
○

5470 5471
○ ○
5473 5472
○ ○

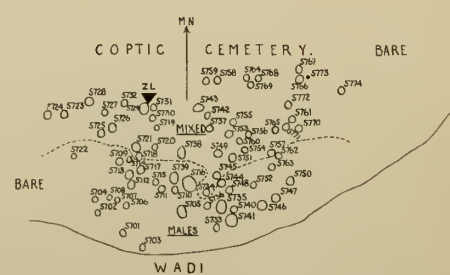
5477
○



PAN GRAVES. SEE QAU AND BADARI, VOL. III.



CEMETERIES 5800, 5700 AND 5100. BADARIAN.



REGISTER OF BADARIAN GRAVES AND TOWN GROUPS.

V

TOMB NUMBER	GRAVE N. E. D.	AZIMUTH	HEAD	SEX	WRAPPINGS	POTTERY. PLATES XII-XIX BB BR PR AB MS SB RB	BEADS Plates X-IX-L	SHELLS	SLATES Pl. XXI	FLINTS	OTHER OBJECTS.	DISTURBED	SEE SECTION	TOMB NUMBER
428	36		S	M								N		428
569	90		S	M?		3d	724	37h		KNIFE	SELENITE: GROUP, xxvi.	P	6	569
569A	90								3			Q	6	569A
1411	25 35 60	142	S	M		57m						N	7	1411
1414	30 50 60	145	S			41k		25c			OSTRICH-EGG: MALACHITE?	P	7	1414
1416	60										SPOON, xxii, 5.	Q	7	1416
1421	27 38 60	157					15e					Q	7	1421
1992	24 48 42	160	S	M?		24h		11k27r				N	8	1992
2015	40 62 46	150	S		MAT.	47h				KNIFE, LVII, 2		P	8	2015
4803	68 94 44	159			MAT.	3d			YES	ARROW	IVORY FINGER-RING	Q	9	4803
4810	42 58 52		S	M	MAT.	57p						Q	9	4810
4848	29 33 52	149	S	F	MAT.	61k?						N	9	4848
5101	30 48 42	145	SW	F	MAT. SKINS LINEN: Lxi, 1-4 Lix, 5.		FRAGS.		SPATHA			P	16	5101
5103	69 93 60	170				21c						Q		5103
5104	52 96 42	170				47m 10f		75 ^① 15C ₃ 86 ^② P ₁₆	11	5 FLAKES	FISH-SPINE: SPOON, xxii, 6: PLUG, xxiv, 7: GROUP, xxvi: PIECE OF HORN	Q		5104
5105	56 92 42	164									HORN: PEBBLE: FISH-SPINE: SELENITE	Q	16	5105
5106	39 60 58	179								SPATHA		Q		5106
5107	58 88 63	155										Q		5107
5108	70 96 48	164				5fh		86 ^② 24 ^③ 26 ^④ 30 ^⑤ 14			IVORY FIGURINE, xxiv, 2, xxv, 3, 4: PEBBLE	Q	16	5108
5109	50 76 57	159	S				31k					Q	16	5109
5110	36 54 36	139	SE	F	MAT. LINEN (Lxi, 5: Lix, 5-9)			ROUGH PEBBLE			BASKET, Lxi, 5: BONE, Lxi, 6.	P	16	5110
5111	24 37 23	15			MAT.		SCRAP	78 ^① 86 ^② 16 ^③ 29 ^④ 16 ^⑤ 10 ^⑥ 12 ^⑦ 14 ^⑧ 89 ^⑨ 6 ^⑩ 6 ^⑪				Q	16	5111
5112	60 34 42	150			MAT.	5m 35k		86 ^④ 24 ^⑤ 14 ^⑥ 89 ^⑦ 3 ^⑧ 3 ^⑨ 12	10	ARROW, xxix, 6: 3 FLAKES	9 PEBBLES: IVORY PINS: BONE AXL & NEEDLE BASKET: MALACHITE: FISH-SPINE: IVORY VASE, xxiii, 3: COPPER PIN: IVORY BANGLE, xxiii, 12: 2 PLUGS, xxiv, 8, 11: GROUP xxvi	P		5112
5113	17 32 32	144	S		MAT.						ANIMAL BURIAL	N	16	5113
5114	38 51 53	152				5d					WOOD: TUSK: PEBBLE	Q	16	5114
5115	32 48 49	131	M		MAT.	38j					IVORY BANGLE, xxiii, 22: CROC. PLATE	Q	17	5115
5116	37 43 42	151					SCRAPS OF 2.			ARROW: 5 SMALL TOOLS, xxix, 6.		Q	17	5116
5117	36 34 33	165									PIERCED DISK: QUARTZITE GRINDER	Q	17	5117
5118	25 35 93	163						ROUGH PEBBLE		2 FLAKES	IVORY PIN, xxiv, 5: GROUP, xxvii, 2	Q	17	5118
5119	18 24 28	122	C		MAT.			86 ^④ 24 ^⑤ 14 ^⑥	ANCILLARIA			Q		5119
5120	55 82 40	154			MAT.		SCRAPS			2 ARROWS, xxix, 6: FLAKE: SAW	PLUG: GROUP, xxvi	Q	17	5120
5121	32 49 35	144	E				3k					Q	17	5121
5122	HOLE 30						SCRAPS.				NO GRAVE		17	5122
5123	51 53 39											Q	17	5123
5124	43 67 38	139				9h				3 FLAKES	IVORY WAND?: GRINDER	Q	17	5124
5125	38 38					24m				ARROW	PIERCED DISK	Q	18	5125
5126	55 82 48	169				57e 21h		21g			IVORY BANGLES, xxiii, 13, 21	Q	18	5126
5127	58 76 54	149			MAT.							Q	18	5127
5128	43 47 41	159	M							KNIFE	IVORY BANGLE, xxiii, 16: GROUP, xxvii, 2	Q	18	5128
5129	28 42 47	154			MAT.	8e						Q	18	5129
5130	48 60 60	155				27h		78 ^③ 89 ^④ c ₁₂	2 OLIVA		COMB, xxiv, 18: IVORY SPOON, xxii, 3-6 GROUP, xxvii, 2	Q	18	5130
5131	58 95 60	165									IVORY BANGLE, xxiii, 13: VASE, xxiv, 2.	Q	18	5131
5132	60 84 60	150						86 ^④ 16 ^⑤ 10 ^⑥ 12 ^⑦ 14 ^⑧ 89 ^⑨ 6 ^⑩ 6 ^⑪	ANCILLARIA: NERITA		PIERCED FLINT NODULE	Q	18	5132
5133	58 90 50	145					SCRAPS OF 2	75 ^④ c ₁₂	NATICA		IVORY FRAGS.	Q	18	5133
5134	23 45 40	145	SE	C	MAT. SKINS	7m				SAW, xxvii, 2.		N	18	5134
5135	48 60 40	155				47e					BONE VASE, xxvii, 2	Q		5135
5136	70 94 60	148				41f						Q	19	5136
5137	46 48 42	157	M		MAT.							Q	19	5137
5138	58 84 53	156	SE	F	MAT. LINEN							Q	19	5138
5139	42 50 36	8	F			16p						Q	19	5139
5140	53 78 56	166					4	27p	75 ^④ 15 86 ^⑤ 26 ^⑥ 28 ^⑦			Q	19	5140
5141	35 51 37	138			MAT.	41d		25r				Q	19	5141
5142	53 75 60	156			MAT.							Q	19	5142
5143	63 84 49	168			MAT.?				NERITA	FLAKE	2 IVORY STAVES, xxiv, 6: IVORY BANGLE, xxiii, 17: PLUG, xxiv, 12: GROUP, xxvii, 2	Q	19	5143
5144	47 77 57	159			MAT.		SCRAPS	79 ^④ 6 ^⑤				Q	19	5144
5145	19 28 30	13	S	C	MAT. LINEN	77e		19f				N	19	5145
5146	55 77 48	153			MAT.	24e						Q	19	5146
5147	39 72 33	166	S	F	MAT.	15e 9j						P	19	5147
5148	46 67 30	166			SKINS			86 ^④ t ₂		ARROW, xxix, 6: FLAKE	ANIMAL BONES	Q	19	5148
5149	40 50 57	167			MAT.	19p						Q	19	5149
5150	48 55 31		M								IVORY VASE: BANGLE?	Q	20	5150
5151	56 94 53	149	S	F	MAT.						IVORY BANGLES, xxiii, 12, 15, 16, 18, 22, xxvii, 2 PLUG, xxiv, 9.	P	20	5151
5152	25 51 19	10	S						13		IVORY BANGLE, xxiii, 23: SPOONS: SPINDLE WHORL: PEBBLE: GROUP, xxvi.	Q	21	5152
5153	39 56 51	149					SCRAP					Q		5153
5154	29 45 31	145			MAT.			75 ^④ 15 86 ^⑤ 28 ^⑥			BONE POINT: PLUG, xxiv, 10.	Q	21	5154
5155	51 82 67	171	M			21e 9m						Q	21	5155
5156	22 32 38	157	S	C			SCRAPS					Q		5156
5160	37 63 46	170	M		MAT.							Q		5160
5161	47 80 48	155	M		MAT.							Q		5161
5162	54 72 48	166	S	M	MAT.							N	20	5162
5163	34 36 67		F					86 ^④ 12 ^⑤ P ₆ 7 ^⑥ 8	ANCILLARIA		MALACHITE	Q	20	5163

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

VI

TOMB NUMBER	GRAVE N. E. D.	AZIMUTH	HEAD	SEX	WRAPPINGS	POTTERY. PLATES XII-XIX						BEADS Plates XLIX-L	SHELLS	SLATES Pl. XXI	FLINTS	OTHER OBJECTS.	DISTURBED	SEE SECTION	TOMB NUMBER		
						BB	BR	PR	AB	MS	SB									RB	
5164	46 48 66			M	MAT.							78d ₉ 80c ₃ 89b ₆	ANCILLARIA			IVORY VASE, xxiii, 7 : IVORY HOOK, xxiv, 17	Q	20	5164		
5165	53 79 36	176		M	MAT.		24k									PEBBLE	Q	20	5165		
5206	HOLE 11													19 ROUGH FLINTS				21	5206		
5213	HOLE 25													22 ROUGH FLINTS			SHELL HOOK, xxiv, 16 : GROUP, xxix, 1		21	5213	
5222	28 36 53	33	N	F	SKINS					25t								N	21	5222	
5223	41 34 48	168	S	M			52h											P	21	5223	
5224	33 39 56	9			MAT.		12d		29k									Q	21	5224	
5225	25 40 42	164	S	F	MAT.		31e											N	21	5225	
5227	39 44 40	165					61k									POTTERY FIGURINE, xxiv, 1, xxv, 6, 7.	Q	21	5227		
5228	36 48 54	158					61f											Q	21	5228	
5285	58 79 41	177					38h											Q	21	5285	
5290	24 26 38						44m												21	5290	
5294	28 38 48	6	N	F	MAT.		52e												21	5294	
5317	HOLE		S	M	SKINS														21	5317	
5342	HOLE 19		S	M	MAT. SKINS		21t												N	22	5342
5348	40 50 28		S	M	MAT.		47h												N	22	5348
5349	30 40 25		S	M	MAT.		5h												N	22	5349
5350	30 42 38		S	C	MAT.		64h												N	22	5350
5351	24 48 32		S	M	MAT.														N	22	5351
5352	30 40 28		S	M	MAT. SKINS														N	22	5352
5353	40 50 40		S	M	MAT. SKINS		21p												N	22	5353
5354	35 40 23		S	C	MAT.		34e												N	22	5354
5355	28 40 26		S	C															N	23	5355
5356	38 42 28		S	M	MAT.		19h												N	23	5356
5357	HOLE 22		S	C			36h												N	23	5357
5358	38 42 23		N	M	MAT. SKINS														N	23	5358
5359	28 36 40		N	M	MAT. SKINS														N	23	5359
5360	30 35 30		E	M	MAT. SKINS														N	23	5360
5361	28 40 22		N	M	MAT. SKINS														N	23	5361
5362	40 40 32		S	M	MAT.														N	23	5362
5363	26 37 20		S	C	MAT.														N	23	5363
5364	34 44 22		S	C	MAT.		64c	24k				75c ₉ 86m ₁₂	OLIVA, NATICA, CONUS, CERITHIUM, NERITA, ANCILLARIA					N	23	5364	
5365	27 40 20		S	C	MAT.														N	24	5365
5366	32 45 24		S	M	MAT.														N	24	5366
5367	26 42 24		S	M	MAT.														N	24	5367
5368	39 48 38		S	M	MAT.														N	24	5368
5369	30 40 32		S	M	MAT. SKINS														N	24	5369
5370	40 30 30		S	M	MAT. SKINS														N	24	5370
5371	40 40 26		W	C	MAT.														N	24	5371
5372					MAT.														N	24	5372
5373	40 40 30		S	M	MAT. SKINS		21e												N	24	5373
5374	35 40 30		S	M	MAT. SKINS-LINEN		16c34p						PEBBLE. CORAL. 4 CONUS						N	24	5374
5375	30 40 42		N	M	MAT. SKINS														N	24	5375
5376	32 40 42		S	M	MAT.														N	24	5376
5377	40 45 42		E	M	SKINS														N	24	5377
5378	39 48 40		S	M	MAT. SKINS														N	24	5378
5379	HOLE						19c												Q	24	5379
5380	40 42 28		SE	M	MAT. SKINS														N	24	5380
5381	30 40 28		S	C	MAT.														N	24	5381
5382	HOLE 38																		N	24	5382
5383	35 40 35		S	M	MAT.		34m												N	24	5383
5384	40 42 20		S	M	MAT.														N	24	5384
5385	36 43 28		S	M	MAT. SKINS														N	25	5385
5386	40 32 45		S	M	MAT.		64m												N	25	5386
5387	38 50 40		S	M	MAT.														N	25	5387
5388	50 50 30		S	M	MAT.		10m												N	25	5388
5389							19c												Q	25	5389
5390	40 40 40		S	F	MAT. SKINS		61k					86c ₂ 86m ₂	NERITA						N	25	5390
5391																			Q	25	5391
5392	31 37 32		S	F	MAT.		16j												N	25	5392
5393	51 70 40		M		MAT.							82f ₁₆ 86f ₁₀ l ₄						Q	25	5393	
5394	29 35 31		S	F															N	25	5394
5395	35 40 30		S	F	SKINS														Q	25	5395
5396	35 48 20		S	F	MAT.														N	26	5396
5397	50 80 53				MAT.		12d	21e				75c ₉ 78d ₁₂ 86f ₁₈ h ₂₆	NERITA					Q	26	5397	
5398	40 45 52																		Q	26	5398
5399	60 80 35		F		MAT.		5f	34h				76a ₃							Q	26	5399
5401	40 40 40		S	M	MAT. SKINS														P	26	5401
5402	50 80 55				MAT.		24e					86k ₁₈ l ₁₀ 86k ₁₈ l ₁₀						Q	26	5402	
5403	68 80 50				MAT.		24h					75b ₁₅ 76c ₁₉ 86c ₁₅ 78c ₁₃ 86k ₃₀ 89c ₉ 86k ₃₀ 89c ₉ and	SPATHA: PERCED SPIRE PEBBLE	17	10 FLAKES		Q	26	5403		
5405	38 40 40		N	F	MAT. SKINS		24h					27k							N	26	5405
5406	50 60 40											79b ₆	OLIVA : CONUS ANCILLARIA					Q	26	5406	
5407																			Q	26	5407
5408																			Q	26	5408
5409	45 60 43		S	M															P	26	5409

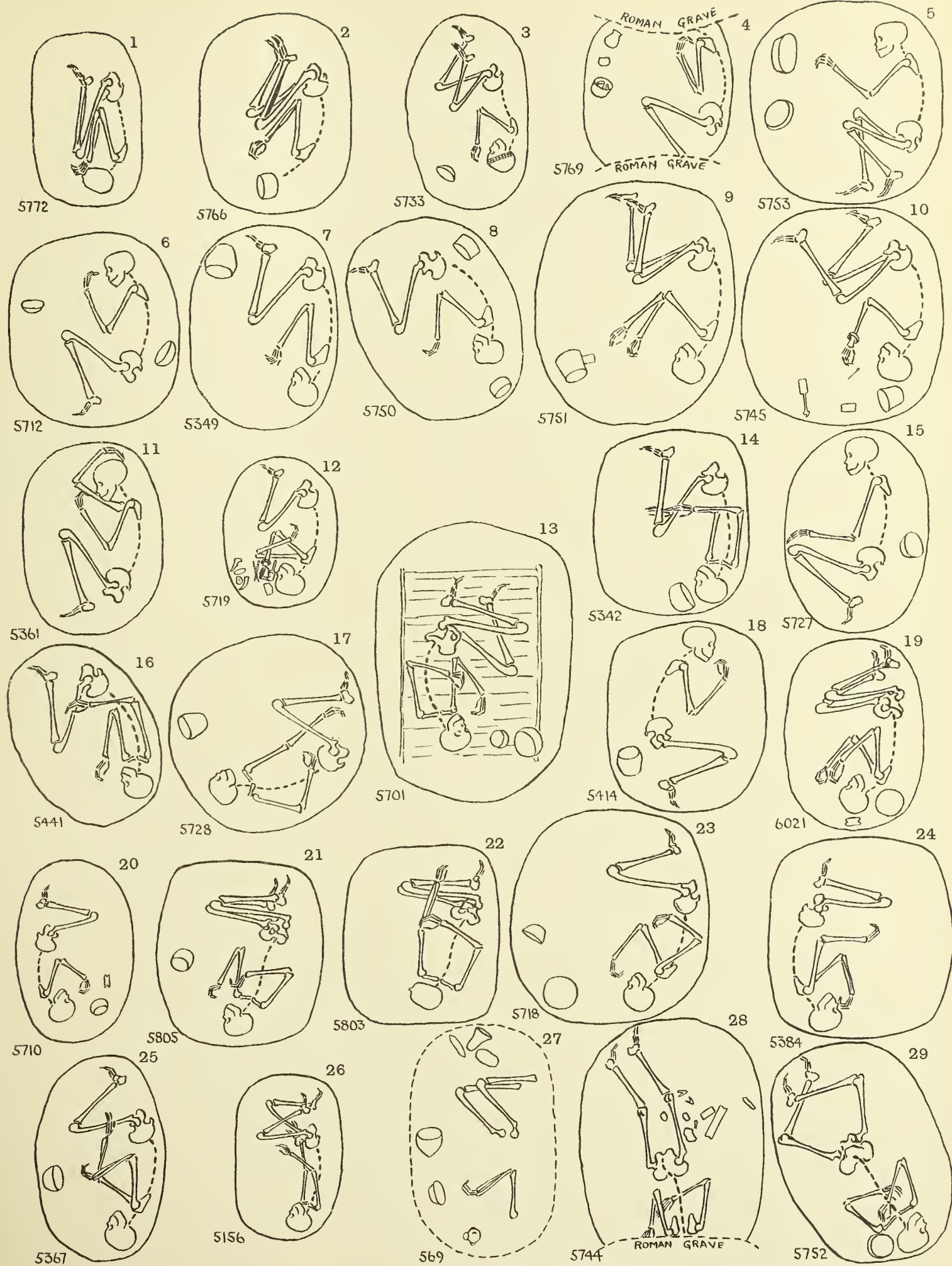
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

TOMB NUMBER	GRAVE N. E. D.	AZIMUTH	HEAD	SEX	WRAPPINGS	POTTERY. PLATES XII-XIX BB BR PR AB M6 SB RB	BEADS ILLATES XLIX-L	SHELLS	SLATES PH. XXI	FLINTS	OTHER OBJECTS.	DISTURBED	SEE SECTION	TOMB NUMBER
5410										KNIFE, xxviii, 3.		Q		5410
5411	40 62 39			F		16p		OLIVA: NERITA				Q	26	5411
5412	35 40 30		N	F?		57e						N	26	5412
5413	27 35 30		S	C	MAT.	31h						N	26	5413
5414	32 40 24		N	F?	MAT. SKINS		75l, 86f, 14m, 6u, 3					N	26	5414
5415						15h						Q		5415
5416	61 78 50			F	MAT.	9p				2 FLAKES		Q		5416
5417				F							STONES: BRECCIA QUARTZITE.	Q	27	5417
5418	40 52 48		S	F	MAT.		75c, 86p, 14v, 14	CONUS SPATHA				Q	27	5418
5419	60 60 48		S	M?	MAT.		41m, 31p					P	27	5419
5421	40 60 48					PRE. R. 69c						Q	27	5421
5422	61 97 63		S		MAT.						ANIMAL BURIAL	P	27	5422
5423	40 38 30				MAT. LINEN						ANIMAL BURIAL	Q	27	5423
5424	40 40 45										ANIMAL BURIAL	P	27	5424
5425	35 42 39		S	F	MAT.		86p, 8	NERITA, ANCILLARIA, MITRA				Q		5425
5426	40 40 40		S	M	MAT. SKINS	8h						P	27	5426
5427	42 60 37		S	F	MAT.		29p					N	27	5427
5428	56 80 58				MAT.	x SCRAPS	78p, 89d, 12	PURPURA: SPATHA	x	7 FLAKES	IVORY BANGLE:	Q	27	5428
5429	51 79 53					34e	14n		1	ARROW: 2 COARSE	GROUP, xxix, 5.	Q		5429
5430	HOLE					16p	5h, 18m, 9e, 14f					Q		5430
5431											ANIMAL BURIAL, x, 6.	Q		5431
5434	64 79 44		S		MAT.							N	27	5434
5435	46 38 36		W	F	MAT.							N		5435
5436	40 46 49			M	MAT.	10h	PRE. B. 25b	5f, 4f		4 FLAKES		Q	28	5436
5437	40 45 38						17	SHERDS		MANY FLAKES	HIPPO TUSK	Q	28	5437
5438	40 40 35			F	MAT.						HORN FINGER-RING	Q	28	5438
5439			S	M								N		5439
5440			SE	F	MAT. LINEN							N	28	5440
5441			SE	F								N	28	5441
5442			S									N		5442
5443				M						2 FLAKES	2 BONE AWLS	Q		5443
5444	40 40 46				MAT. SKINS	71h	15	TEREBRA: SPATHA	15		PEBBLE: IVORY BOWL, xxiii, 1. BONE POINT	Q	28	5444
5445	35 41 36		S	F	MAT.		6					N	28	5445
5446	63 71 45										IVORY SPOON, xxii, 4.	Q		5446
5447	50 58 50		S	M	MAT. SKINS	12d						P	28	5447
5448				F							HORN FINGER-RING	Q		5448
5449	68 80 60			M	MAT.		75b, 86f, 14p, 14, 89e, 18				IVORY SPOON?	Q		5449
5450	HOLE 33						49m							
5451	HOLE 6													
5452	40 52 30					3h	CUP			MANY ROUGH: SAW: CELT	BONE TOOL: BONE: GROUP, xxix, 2.	Q	28	5452
5453	58 79 38				MAT.	5h, 14h	5h		18	3 FLAKES	POTTERY BOAT, xxiii, 33.	Q		5453
5454	HOLE						41f				IVORY BOWL, xxiii, 4. BANGLES: RING?	Q	28	5454
5455	HOLE						31+				CHARCOAL: GROUP, xi, 4.		28	5455
5457	57 78 49				MAT.						GROUP, xi, 3.		29	5457
5458	HOLE 21						7h				IVORY SPOON, xxii, 7	Q	29	5458
5459	HOLE 29					12f, 14m, 37e 32m, 69p								
5461					MAT.					ADZE, xxviii, 3.	BONE NEEDLE & CASE, xxvii, 1.	Q	29	5461
5470	40 42 62							NERITA		ARROW, xxix, 5.		Q	29	5470
5520	HOLE 27					9	37e, 36e							
5527	HOLE 10									MANY ROUGH	GROUP, xxviii, 1.	N	31	5520
5548	HOLE 8										2 PORPHYRY SLABS: 3 BASKETS: IVORY	N	31	5527
											VASE, xxiii, 5. PEBBLE: WHORL, xxiii, 30.	N	31	5548
											2 HORN-CORES			
5550	HOLE									FLAKES OF QUARTZ CRYSTAL		N	31	5550
5555	HOLE						27c, 31p, 33h				GROUP, xi, 5.	N	31	5555
5556	HOLE						19p, 27e, 14h, 31h				CHARCOAL: GAZELLE? JAW: GROUP, xi, 2	N	31	5556
5701	40 55 20	65	S	C	REEDS	24p		OLIVA			FLOWERS	N	31	5701
5702	38 30 25	118	SE	M	MAT. SKINS	x SCRAPS						N	31	5702
5703	40 50 20	93	W	M	MAT.							N	31	5703
5704	20				MAT.							N		5704
5705	52 75 45	175	N	M		34e	75c, 12, 86k, 26, 74	CYMATIUM: NERITA		SAW: FLAKES	PEBBLE: OCHRE: 3 NEEDLES: POINT: IVORY	N	31	5705
5706	25 25 20		S	C	MAT.	36f	78b, 3				BANGLE: GROUP, xxvii, 4.			
5707	28 24 20					24p	75c, 12, 86k, 26, 74					N		5706
5708	20 20 25		SE	C	MAT.		86k, 24k, 26m, 20p, 10	NERITA				N	31	5707
5709	40 40 24		S		MAT.	34p	4e, 25h					N	31	5708
5710	23 40 38	170	S	C	RUSH COFFIN	74f	75c, 12, 86f, 14h, 26p, 10		16		IVORY SPOON	N	32	5709
5711	40 40 30		S	C	MAT. LINEN	43f	75c, 12, 86f, 14h, 26p, 10	ANCILLARIA				P	32	5710
5712	34 40 45		N	M	MAT. SKINS	15p	9h	ANCILLARIA				N	32	5711
5713			SE	M?		24m	16e					N	32	5712
5714			S	C		4m, 37h						N		5713
5715	33 45 40									ARROW, xxix, 5.		Q		5714
5716	63 80 46	170	S	M	MAT. LINEN, SKINS						2 THROW-STICKS, xxiii, 29, xxv, 1, 2.	N	32	5715
5717			N	M								P		5716
5718	40 46 40		S	F	MAT. LINEN		11c, 78d, 19p, 82h, 86k, 20k, 22	ANCILLARIA				N	32	5717
5719	23 30 29		S	C	MAT.	SCRAPS	86k, 10f, 12m, 10			CORE	STONES: TUSK: BONE TOOL: SPOON, xxii, 1	N	32	5718
5720	30 45 40		S		MAT. LINEN				4		BANGLE, xxiii, 20. ETC. GROUP, xxvii, 6.	P	33	5719
5721	40 57 40		S	M?	MAT. SKINS		75b, 12, 86k, 20, 74				PEBBLE: BASKET	N	33	5720
												N	33	5721

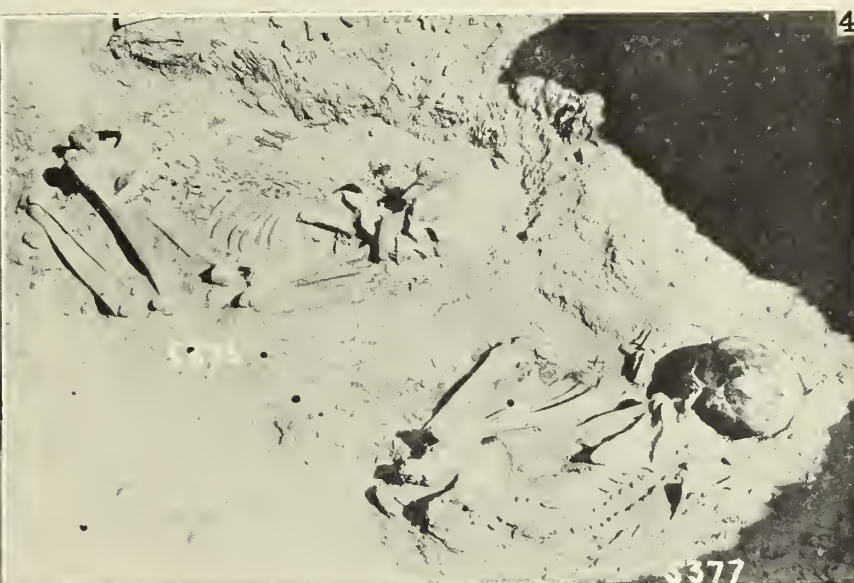
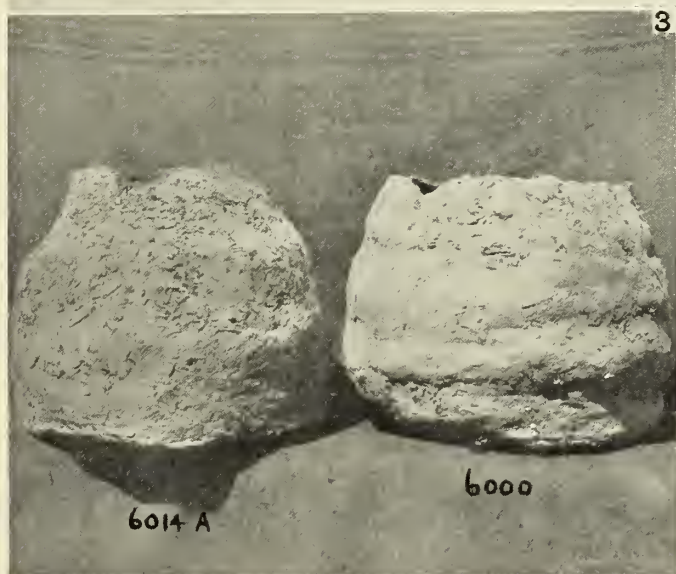
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

TOMB NUMBER	GRAVE N. E. D.	AZIMUTH	HEAD	SEX	WRAPPINGS	POTTERY. PLATES XII-XIX							BEADS Plates XLIX-L	SHELLS	SLATES PL. XXI	FLINTS	OTHER OBJECTS.	DISTURBED	SEE SECTION	TOMB NUMBER
						BB	BR	PR	AB	MS	SB	RB								
5722	20 26 14		S	C	MAT.								75c ₉ 86k ₁₀ m ₂₂	ANCILLARIA: CONUS				N 33	5722	
5723	30 40 32		S	F	MAT. SKINS			6e			24m							N 33	5723	
5724	30 40 30		S		MAT.	47h												N 33	5724	
5725	32 40 30		S		MAT. SKINS									ANCILLARIA	ARROW, xxix, 5.			N	5725	
5726	32 40 32		S	F	MAT. SKINS						33m							N 33	5726	
5727	25 42 22		N	M	MAT. SKINS						11h							N 33	5727	
5728	40 40 38		W	M	MAT. SKINS						39h					CALCITE CRYSTAL		N 33	5728	
5729	54 63 40		N	F	MAT.			21e								2 STICKS		P 33	5729	
5730	30 40 25		S	F?	MAT.						11h							N 34	5730	
5731	28 39 33		S	F	MAT. SKINS													N	5731	
5732	35 40 30		S	C	MAT.			43f					86p ₁₀ 86m ₁₂ 86p ₁₄					N	5732	
5733	24 40 24		S	C	MAT.				SCRAPS		x			OLIVA, NATICA, NERITA				N 34	5733	
5734	20 40 45		S	F	MAT. SKINS											BONE POINT		N 34	5734	
5735	40 65 42		S	M	MAT. SKINS, LINEN								75c ₃ 89 BELT: 89c ₁₆	CLANCULUS: NERITA			GROUP, xxvii, 3.	N 34	5735	
5736						71h	24k				11h							P 34	5736	
5737	20 20 40			C	MAT.						14e		75a ₁₅ k ₁₈	CONUS, POLINICES				N 34	5737	
5738	40 70 36		S	F?							11h		79p ₁₀ 82c ₃ 86k ₁₀ 86p ₁₁	DENTALIUM, NATICA	x	FLAKE		N 34	5738	
5739	40 60 36			M	MAT. SKINS								PEBBLE	NERITA?	x	SAW: KNIFE: FLAKES		N 34	5739	
5740	33 36 34			C									(HIPPO, xxix, 15: 75a ₉)	NERITA, DENTALIUM				Q 35	5740	
													75c ₃ 86k ₁₂ 86p ₁₂ 89p ₁₃							
5741	57 72 40		S		MAT.						31h			NERITA				N 35	5741	
5742	32 32 30		S	C	MAT.						31e							N 35	5742	
5743	40 30 33	156	SE	F?	MAT. SKINS													N	5743	
5744	40 48 52	180	S	M	MAT. SKINS, LINEN				SHERDS					PENDANT: PEBBLE	6,7	2 ARROWS: CORE: FLAKES		P 35	5744	
5745	41 43 52	175	S	F		33h											PEBBLES: GROUP, xxvii, 5	N 35	5745	
5746	46 46 60	119	W	M					SHERDS		x						SPOON, xxii, 2: NEEDLE, xxiii, 26: HORN BANGLE	N 35	5746	
5747	42 43 66	173	S	M													BONE NEEDLE	N 35	5747	
5749	44 45 24	177	S	M	MAT. SKINS						25t							N 35	5749	
5750	35 45 48	160	SE	M		31t	24m											N 36	5750	
5751	43 48 72	144	SE	M	SKINS			9m										N 36	5751	
5752	32 44 67	144	SE		MAT. LINEN				x SHERDS									N 36	5752	
5753	39 40 48	170	N	M	SKINS	5h			FRAGS.									N 36	5753	
5754	36		S	C				24h										N 36	5754	
5755	45				SKINS						27h			CONUS				Q 36	5755	
5757	31 64	170	F?			37h												P 36	5757	
5758	27 40 37	175	S	M	SKINS						36f							N 36	5758	
5759	27 41 31	170	S	M	SKINS													N	5759	
5760	25 35 25		S	C	MAT. SKINS						3e							N	5760	
5761	30 40 36		S	C					1				86k ₂₈	CONUS, MITRA				N	5761	
5762	35 55 30		S	M	SKINS				2					NERITA				N	5762	
5763	30 35 40										31h		75k ₁₅ 86k ₁₀ 86k ₂₂	NATICA			BANGLE, xxiii, 19: FINGER-RING, xxiii, 24	N 36	5762	
5764					LINEN												BONE POINT, xxiii, 25	P 36	5763	
5765	40 35 50		SE	F?	MAT.	x			SCRAPS									Q 36	5764	
5766	30 40 20		S	F							33h							N 36	5766	
5767			S	M	SKINS													N 36	5767	
5768	25 35 25		S		MAT. SKINS	64h					36e							N 36	5768	
5769	30 35 40		N	C	MAT.						24h, 46p, 19t							P 36	5769	
5770	40 40 40		S	F	MAT.	41v												N 37	5770	
5772	22 35 30		S	M	SKINS													N 37	5772	
5773	HOLE 10																	N 37	5773	
5774	30 40 38		S	M	MAT. SKINS			21mt										P 37	5774	
5801	35 43 18		N	F	MAT. SKINS			24h	SHERD									P 37	5801	
5802			N	F	SKINS													P 37	5802	
5803	30 32 33		S	F?	MAT.													N 37	5803	
5804	6		NW	F?	MAT. SKINS													N 37	5804	
5805	35 40 30		M		MAT. SKINS			24h										N 37	5805	
5806	35 40 20		M		MAT. SKINS, LINEN													N 37	5806	
5807	20 15 20		S	C	SKINS								75c ₉ 86k ₂₂	DENTALIUM: ANCILLARIA				N 37	5807	
5808	30 50 40	180	S	M	MAT. SKINS									NERITA				N 37	5808	
5809	30			C	MAT.			20h										P 37	5809	
5810	HOLE					14h												N	5810	
5811	55			C	MAT.			24m										Q	5811	
5812	45		S	M	MAT. SKINS													N 37	5812	
5814	HOLE 8	180										TWO						N 37	5814	
5815	30 30 35		NW	F	MAT.													N?	5815	
5816	30 40 55	180	S	M	MAT. SKINS			26h										P 37	5816	
5817	35 40	180	N	F	MAT.													P 37	5817	
5818	20 35 32		NW	M	MAT. SKINS									SPATHA				N 37	5818	
6002	25 25 40		S	F	MAT.						24m, 31p							N 38	6002	
6003	33 50 45	175	S	M	MAT.						11h							N 38	6003	
6004	27 40 30		S	F?	MAT.													N	6004	
6005									PRE-BTTL					NERITA				Q 38	6005	
6006A	HOLE?					16n					21m							N 38	6006A	
6014A	HOLE								9									N 38	6014A	
6017	HOLE																	N 38	6017	
6018			S	M	MAT. SKINS								86k ₂			ROUGH FLINTS: FLAKING TOOL?		N 38	6018	
6021	18		M?			16p												Q 38	6021	
7193											44m							N 38	7193	

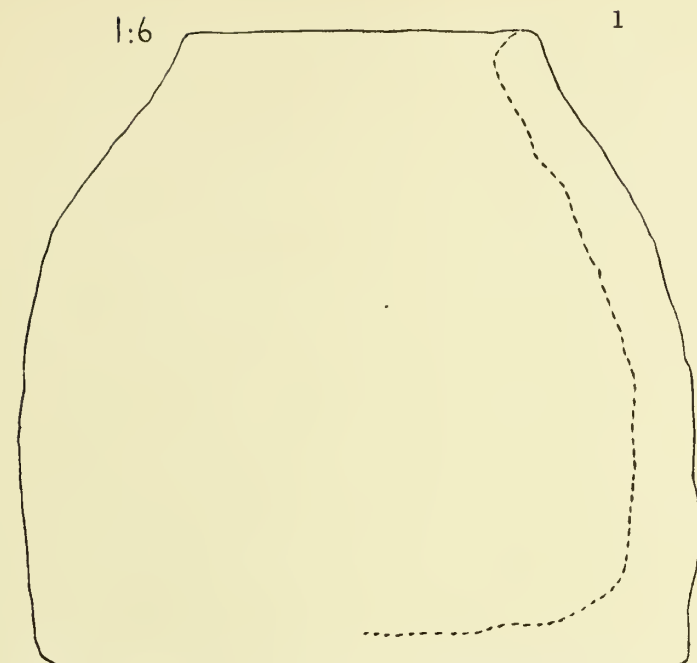
Library
of the
UNIVERSITY OF ILLINOIS



LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



6014A

MUD WITH TIBN

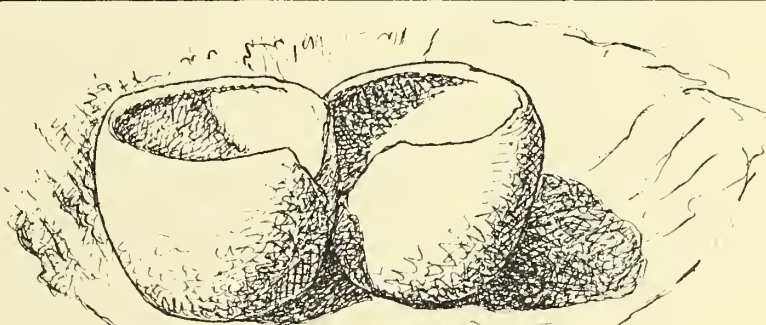


5556 A = TYPE RB 27e: in it RB 27t
 B = " RB 31r
 C = " RB 31h: in it RB 27h and MS 2

D = TYPE RB 19r



5455 TYPE RB 31r



5454

TYPE RB 41f

OLIVA INFLATA



5364 5411 5701
 5406 5700 5733

ANCILLARIA CINNAMOMEA



5364 5700 5717 5725
 5407 5711 5718 5807
 5425 5712 5722

NATICA MELANOSTOMA



5364
 5446

MITRA LITTERATA



5425
 5761

PURPURA (THALESSA) TUMULOSA



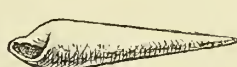
5428

CERITHIUM CAERULEUM?



5364

TEREBRA



5444

CONUS (CORONAXIS) TAENIATUS



5364 5418 5761
 5406 5722

NERITA POLITA or ALBICELLA



5364 5411 5700 5741 6005
 5390 5425 5708 5762
 5397 5470 5733 5807

NATICA MAMILLA



5364
 5733
 5763

ROMAN HOUSE WITH BADARIAN POTS IN SITU UNDER FLOOR.



5555

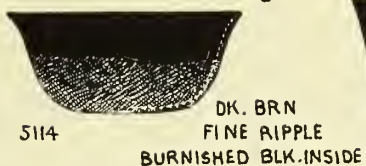
A = TYPE RB 31r
 B = " RB 27t
 C = " RB 33h

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

3D



5D



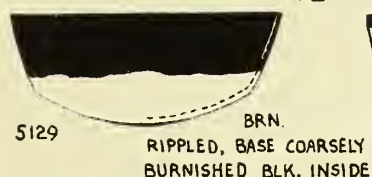
5F



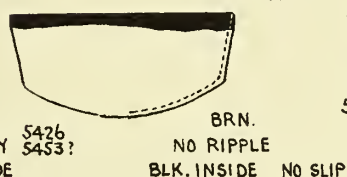
5H



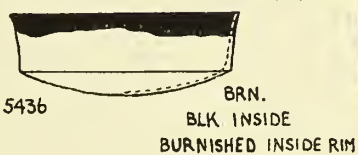
8E



8H



10H



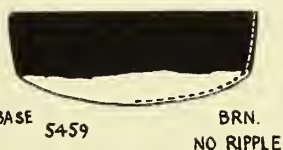
10M



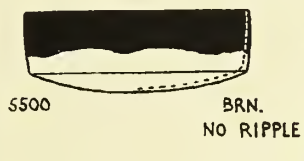
12D



12F



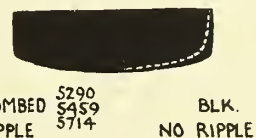
14E



14H



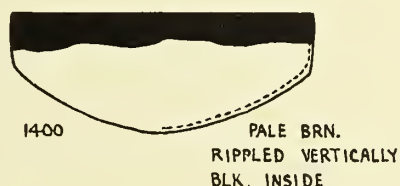
14M



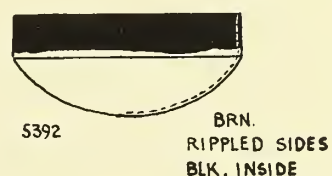
14P



16E



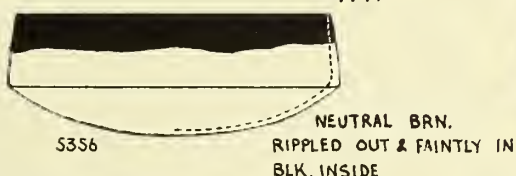
16J



19c



19H



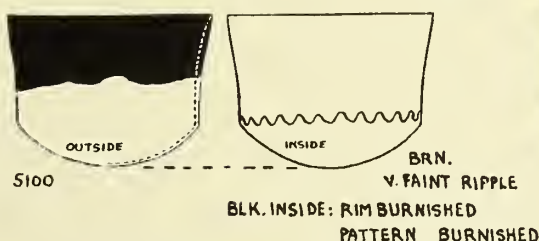
19P



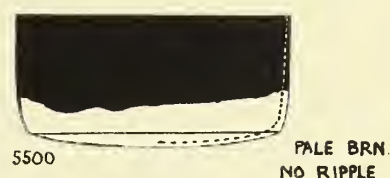
23E



28H



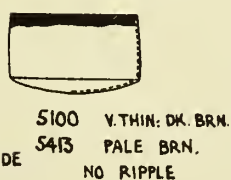
31B



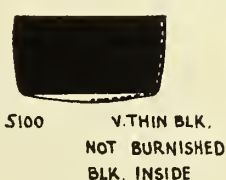
31E



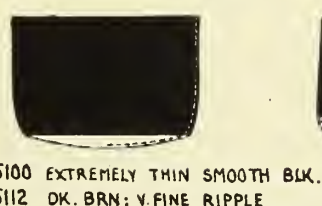
31H



31K



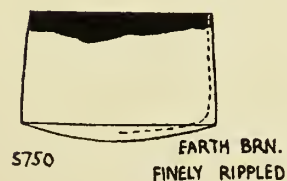
31M



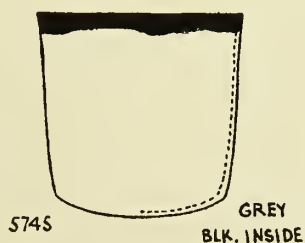
31P



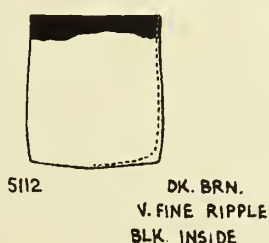
31T



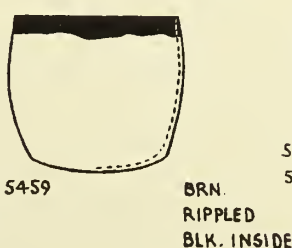
33H



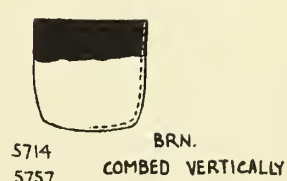
35K



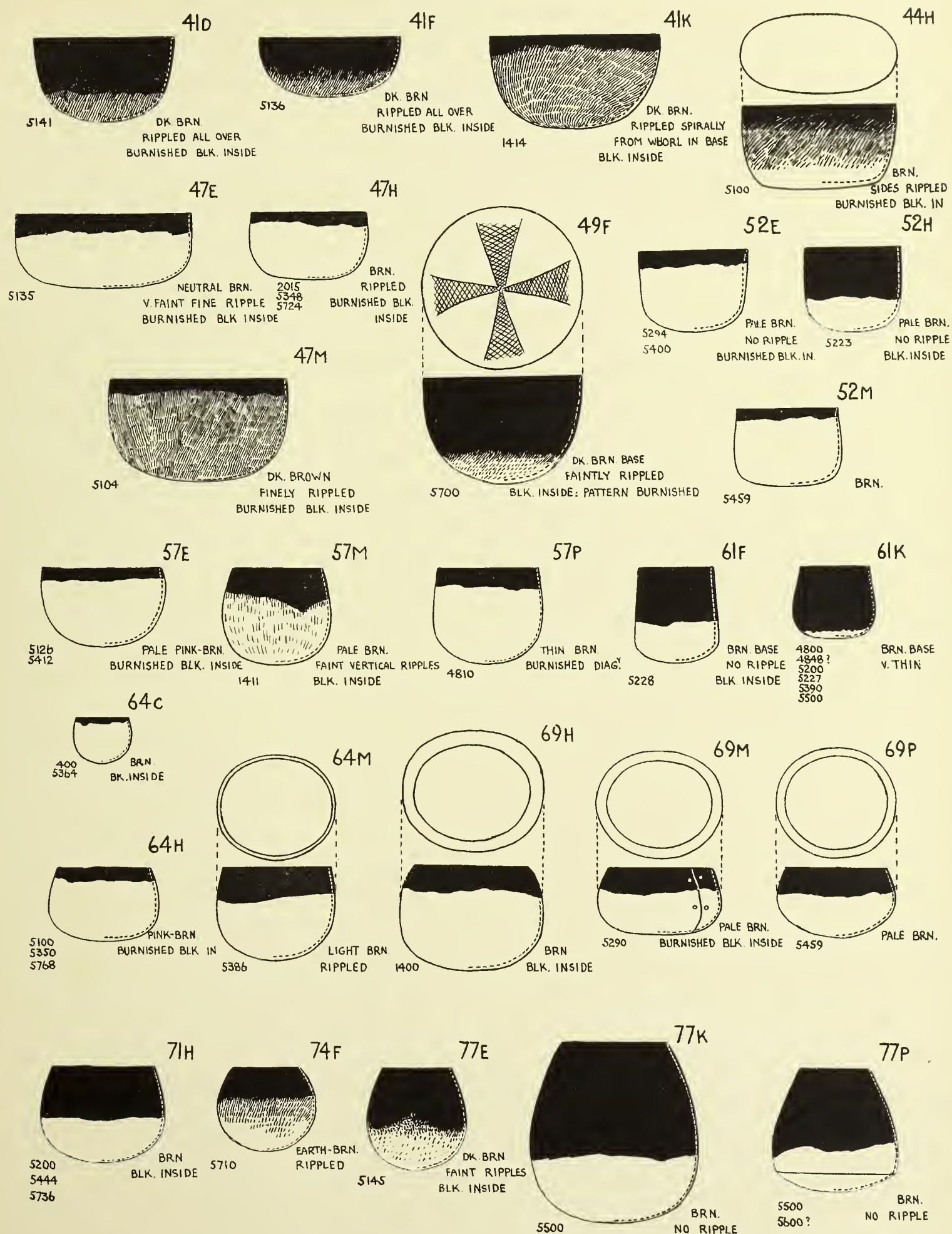
37E



37H



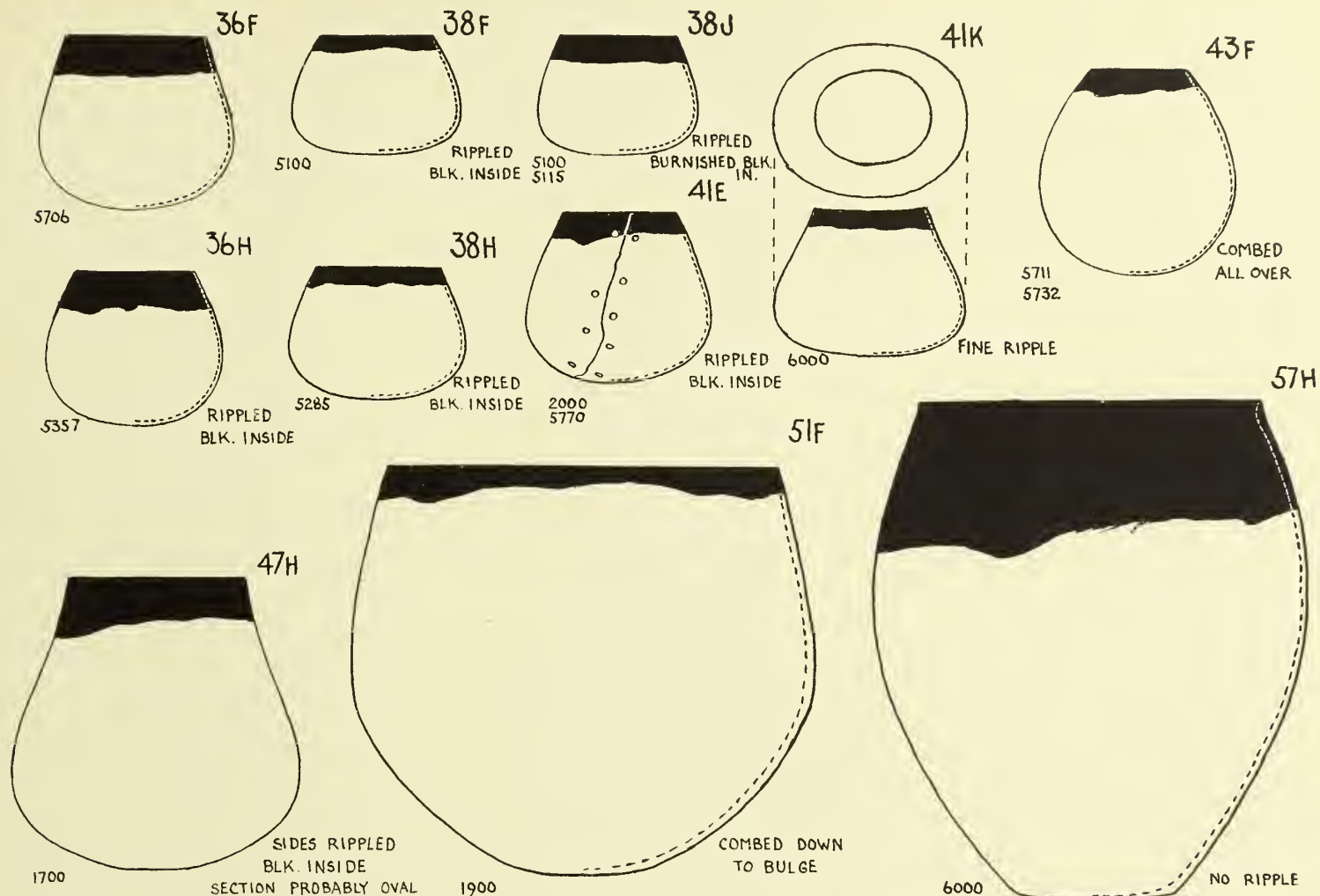
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



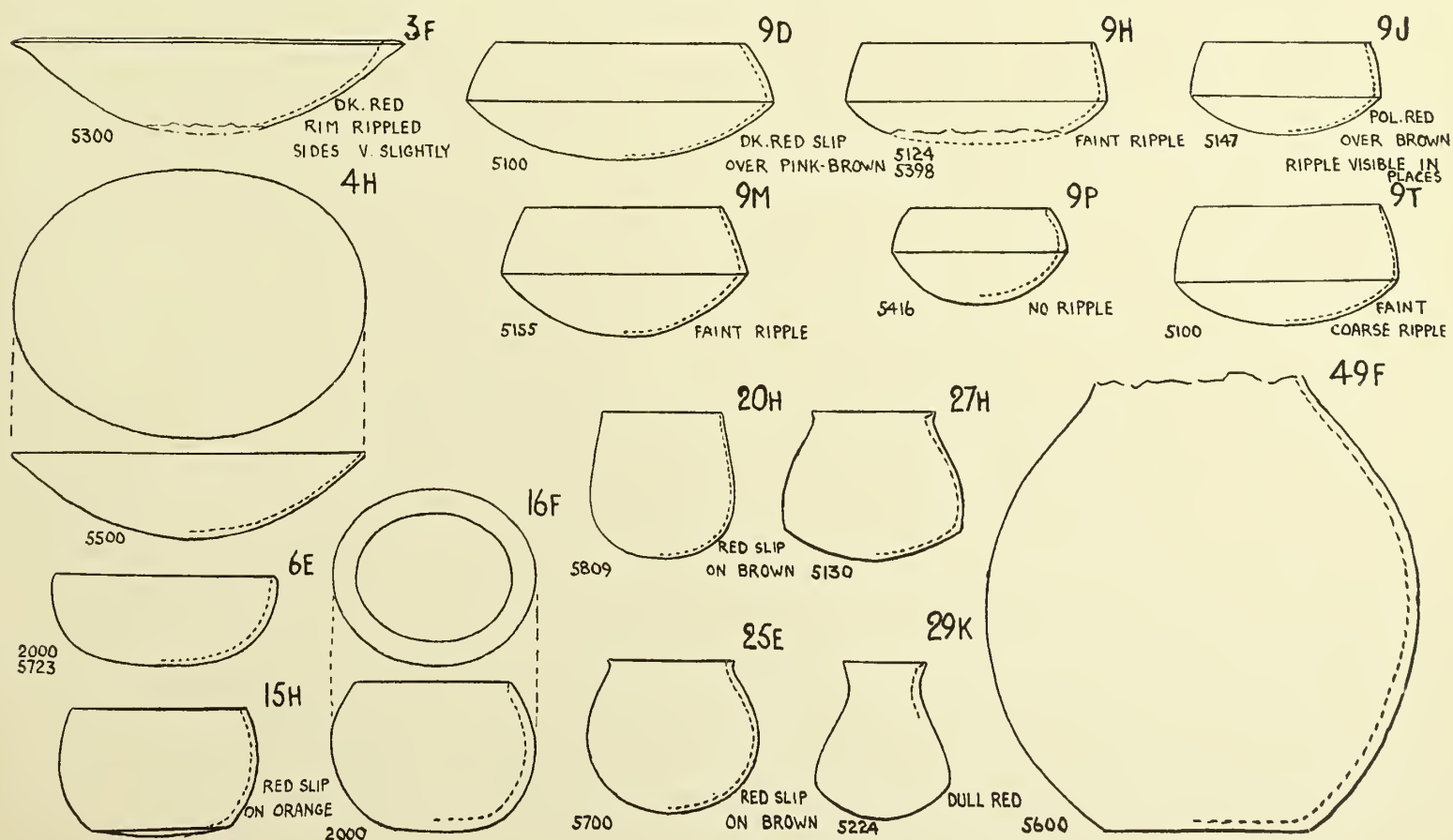
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



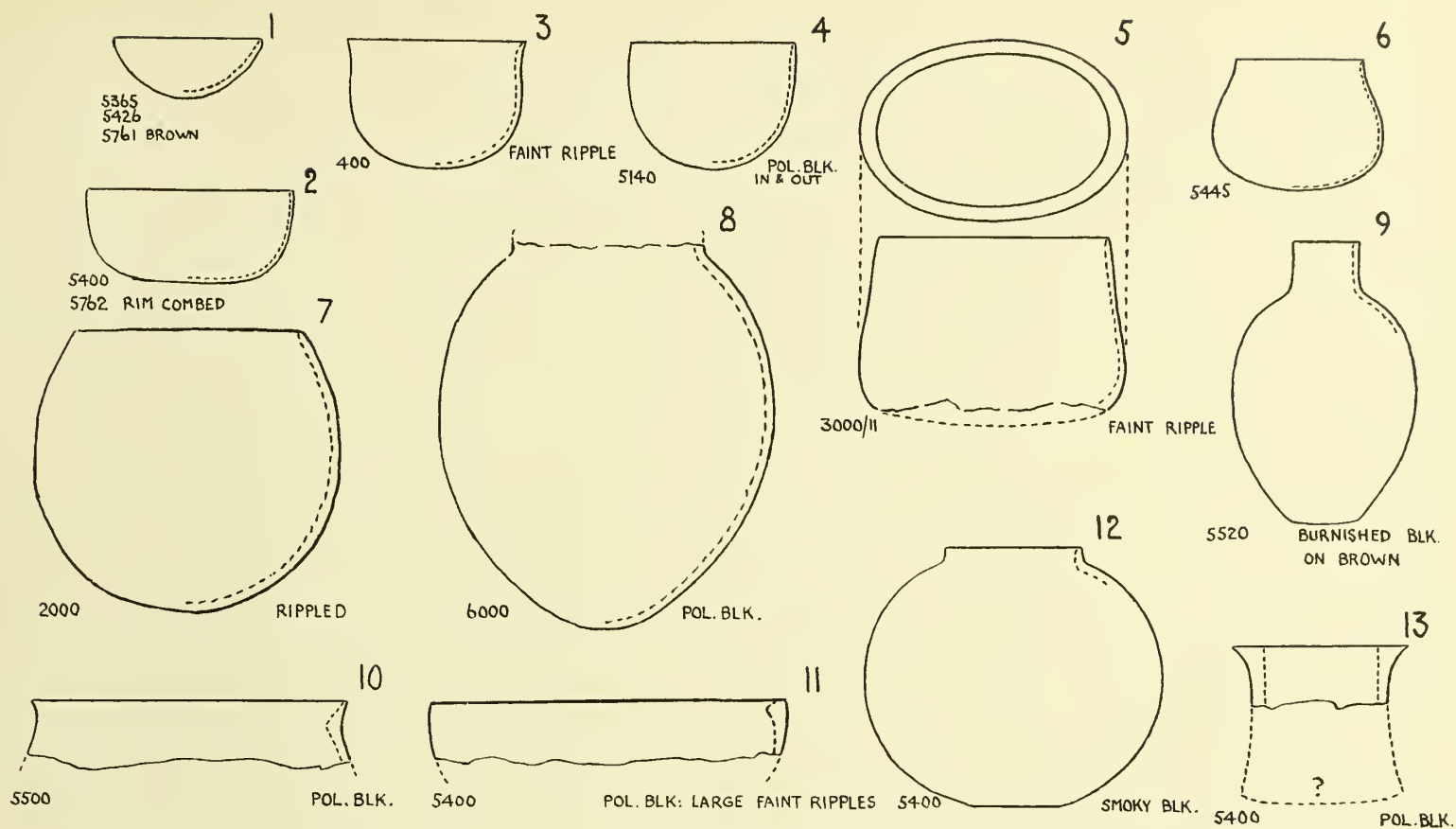
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



POLISHED RED. PR 1-49.



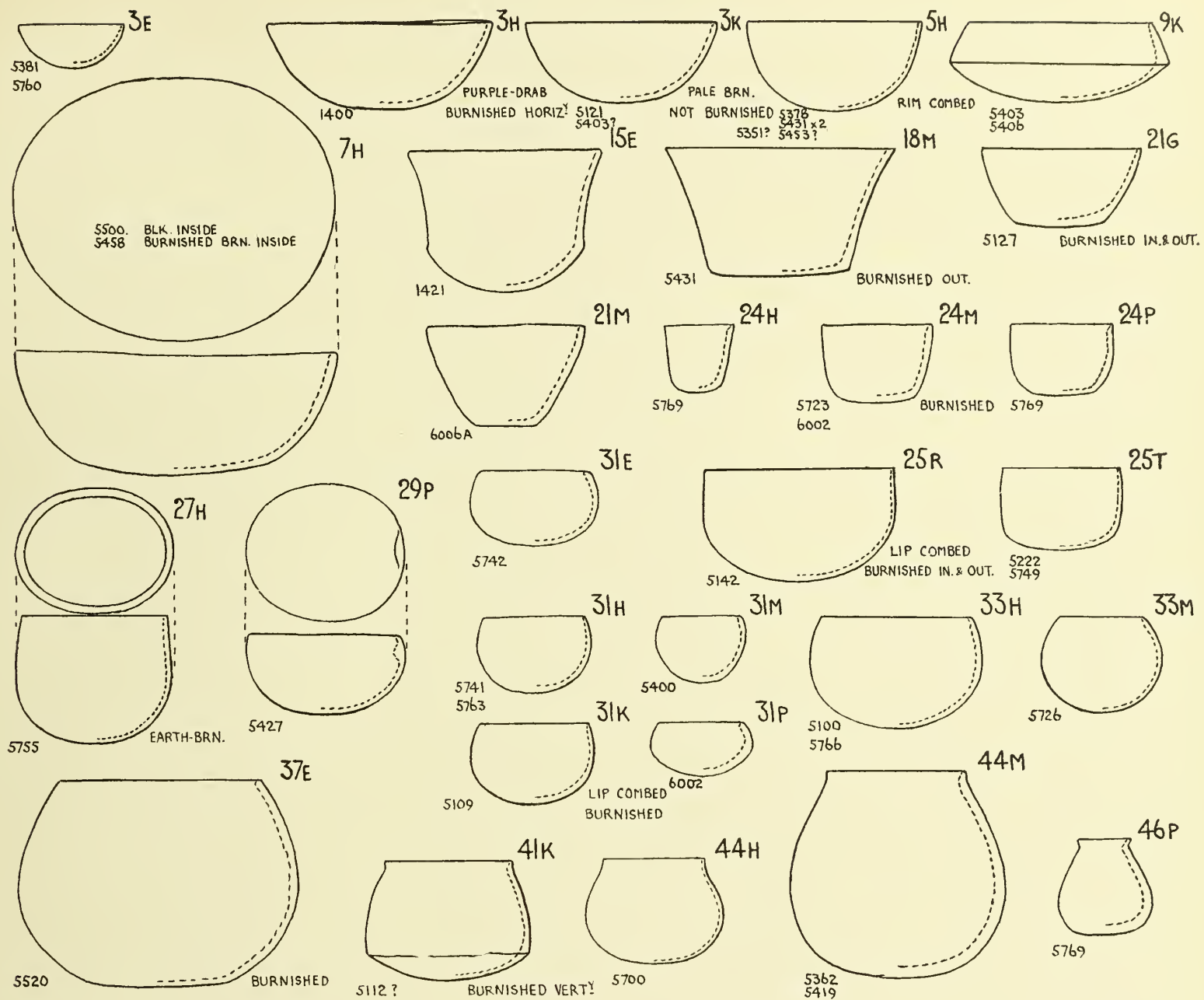
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



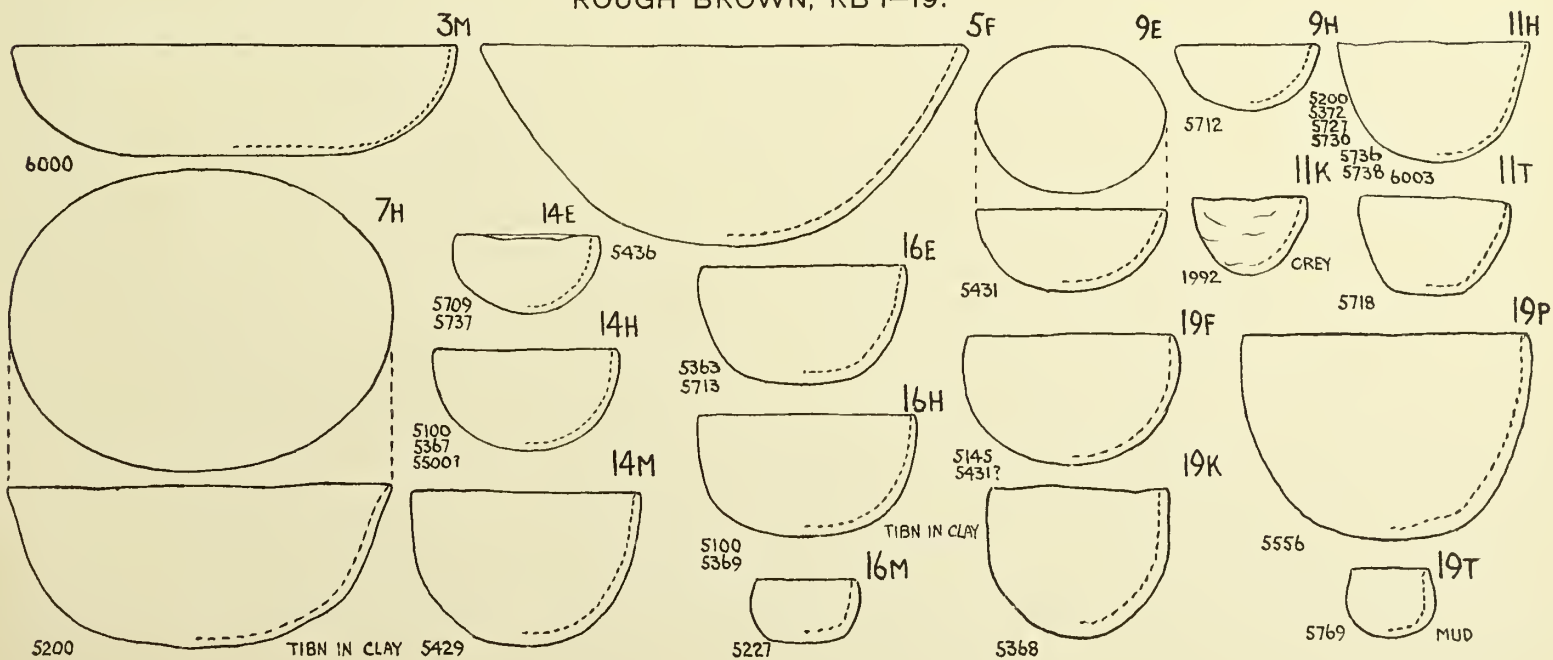
MISCELLANEOUS, MS 1-25.



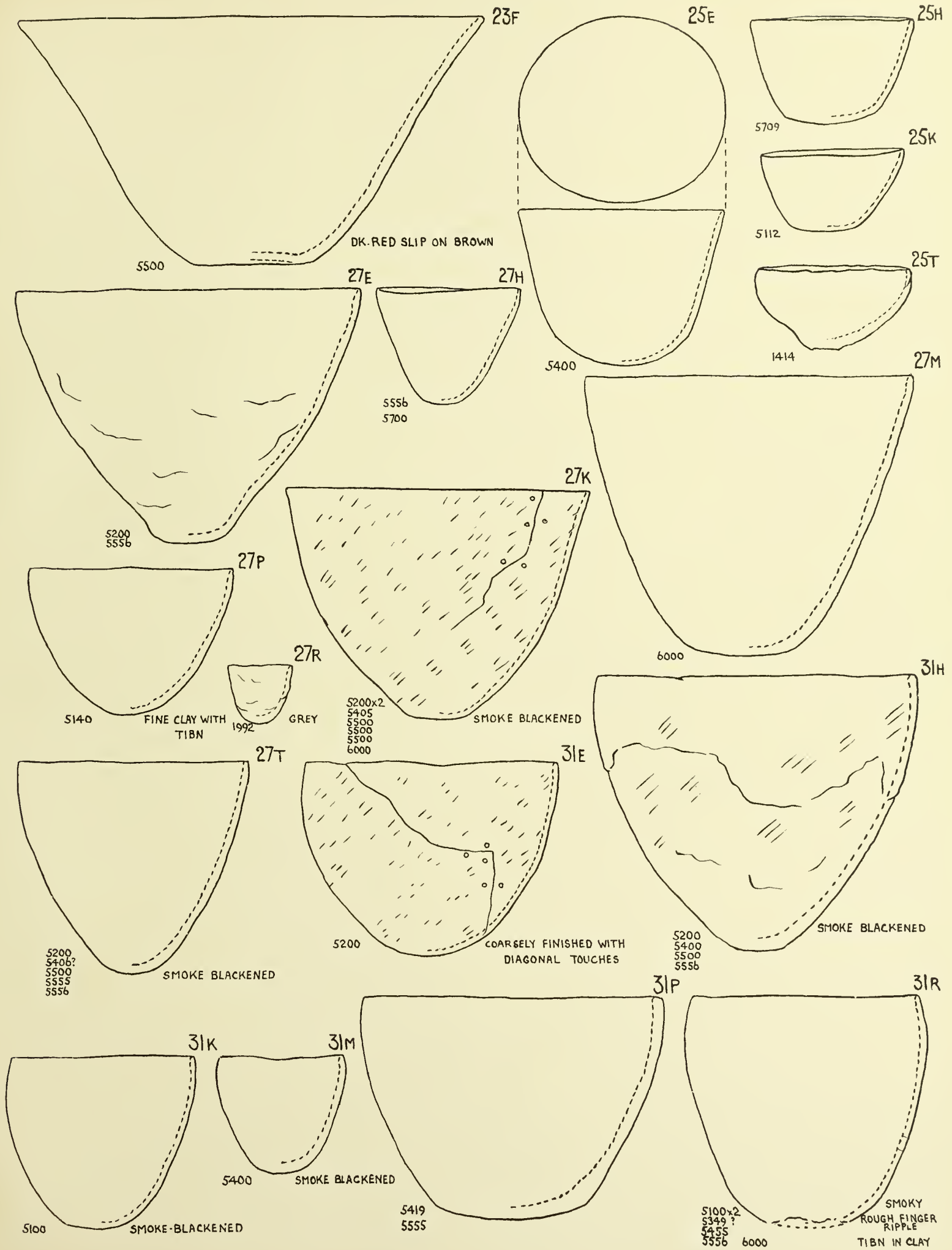
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



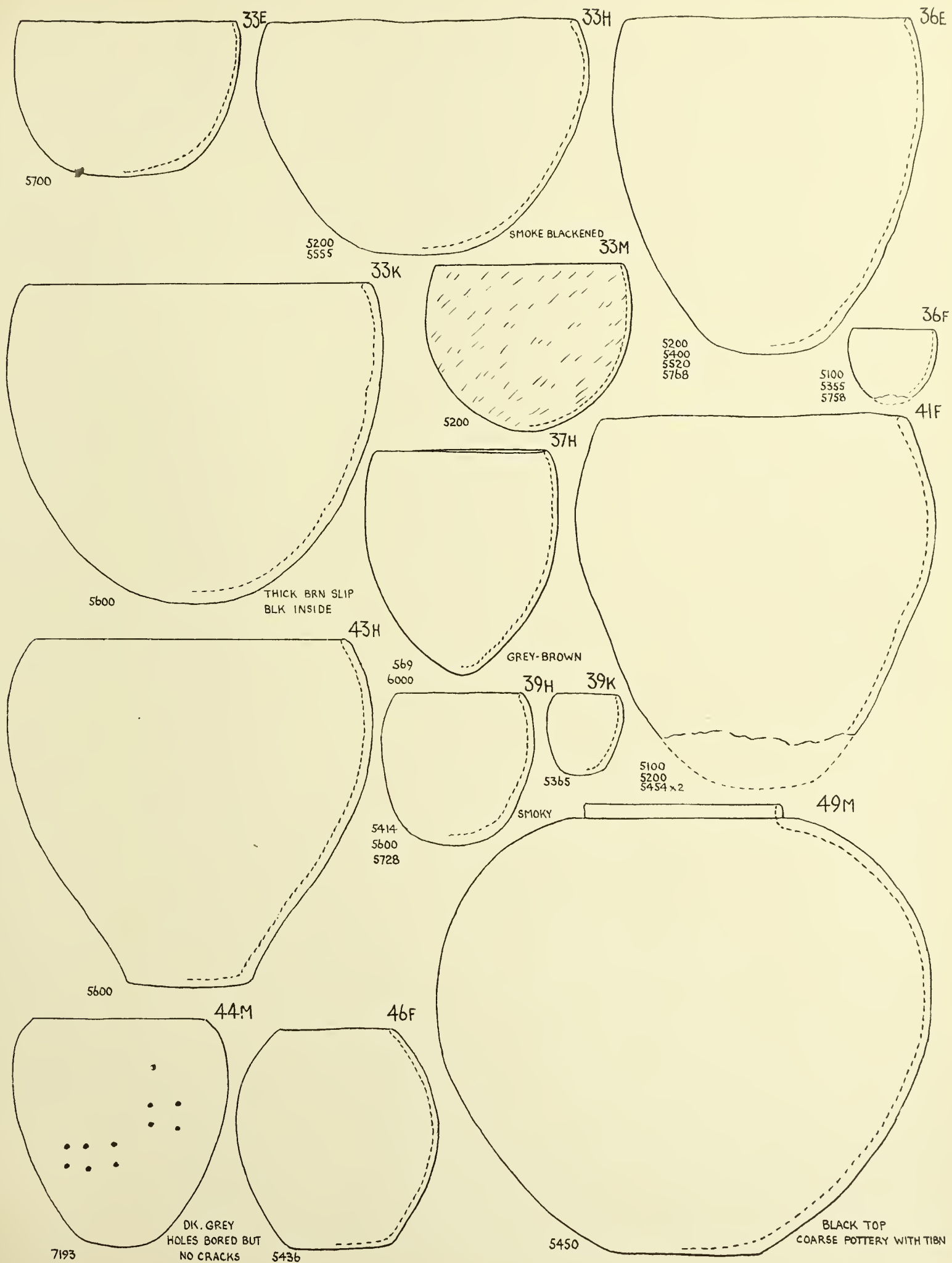
ROUGH BROWN, RB 1-19.



LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

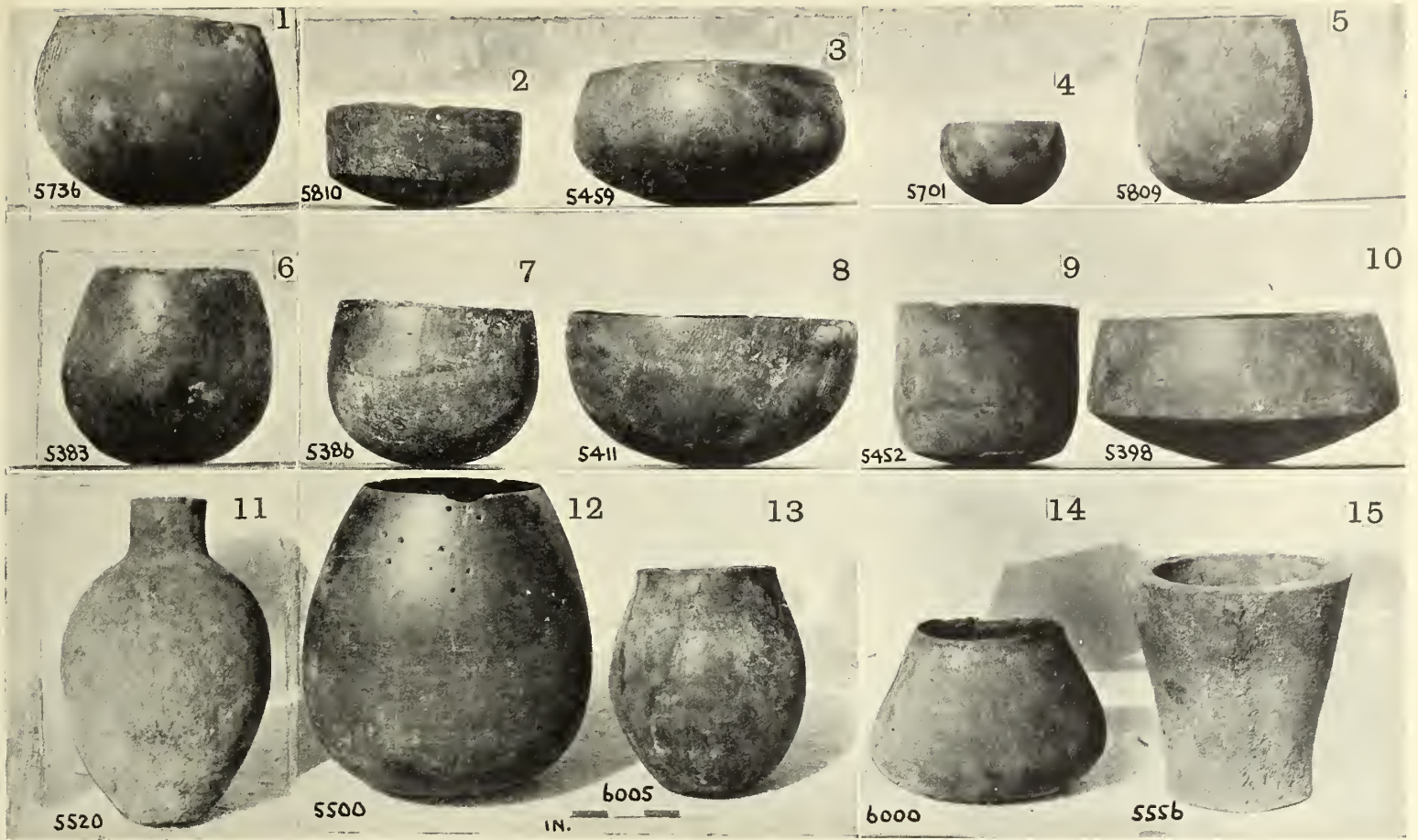
BB. TYPE S.D.	BR. TYPE S.D.	PR. TYPE S.D.	AB. TYPE S.D.	MS. TYPE S.D.	SB. TYPE S.D.	RB. TYPE S.D.
3 D 21	10 F 22	9 M 27	1 24	2 22	3 K 28	5 F 29
5 D 21	15 P 28	15 H 29	4 25	7 21	5 H 24	9 E 24
5 F 21	16 E 25	29 K 27		24 21	9 K 28	9 H 28
5 H 21	16 N 28				18 M 24	11 K 28
8 H 24	16 P 24				21 M 28	14 E 25
10 H 29	21 E 27				24 H 25	14 M 23
12 D 27	24 H 28				24 P 25	16 E 22
12 F 24	24 M 22				41 K 22	16 M 29
14 H 24	34 E 23				44 M 22	19 F 24
14 M 24	34 H 21				46 P 25	19 P 22
31 M 22	34 P 25					19 T 25
31 T 22						25 H 25
35 K 22						25 K 22
37 E 24						27 E 22
37 H 24						27 H 22
47 M 22						27 K 28
52 M 24						27 P 25
61 K 29						27 R 28
69 M 24						27 T 22
69 P 24						31 H 22
77 E 24						31 P 22
						33 H 22
						37 H 21
						39 K 24
						46 F 29

SEQUENCE DATES OF POTTERY TYPES.

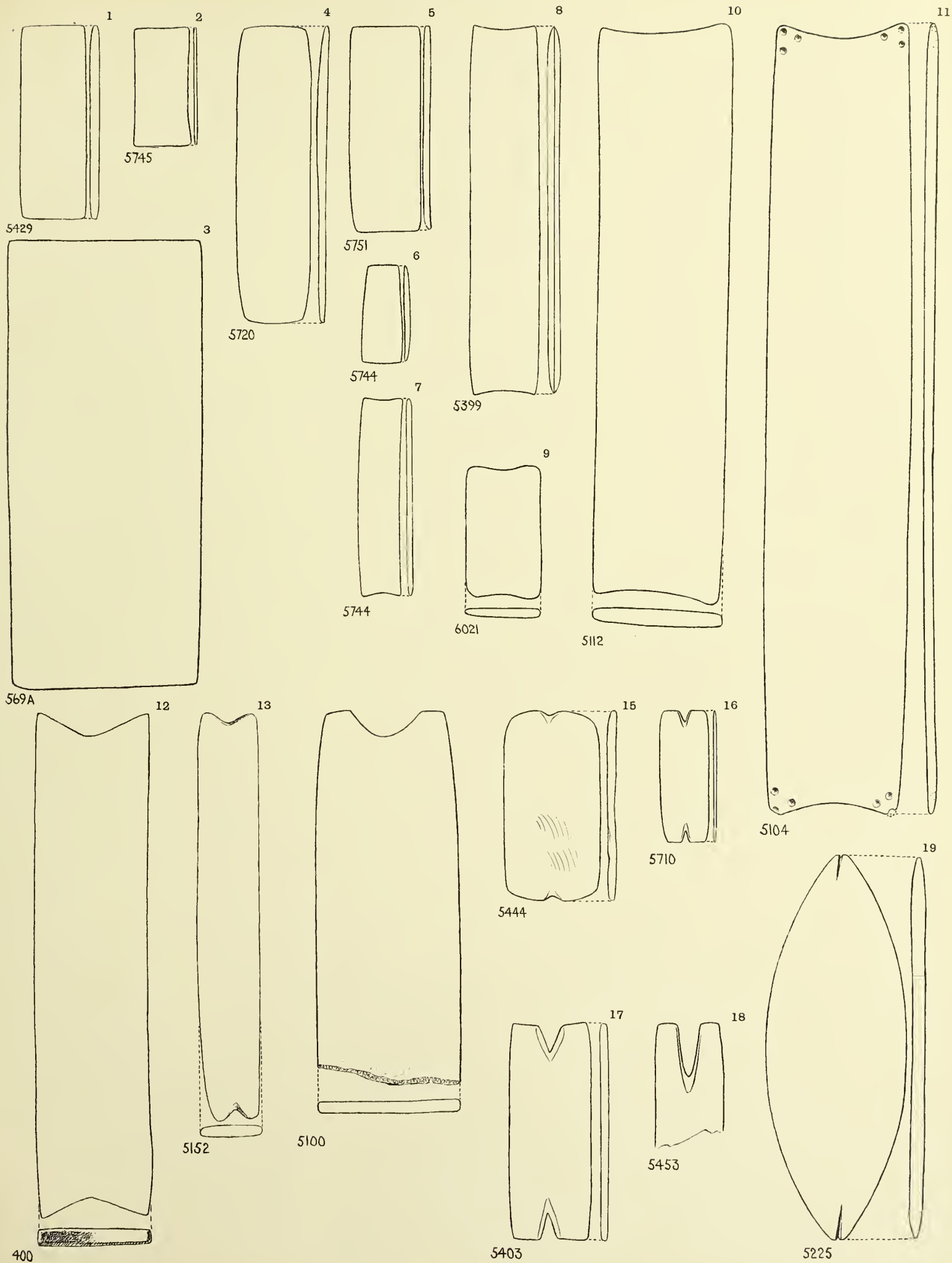
SEQUENCE DATES OF THE TOMBS.

TOMB S.D.	TOMB S.D.	TOMB S.D.	TOMB S.D.	TOMB S.D.	TOMB S.D.
569 21	5145 24	5365 24	5411 24	5556 22	5757 24
1992 28	5155 27	5373 27	5419 22	5705?23	5761 24
5104 22	5224 27	5374 25	5426 24	5709 25	5769 25
5108 21	5227 29	5378 24	5429 23	5712 28	5810 24
5112 22	5290 24	5390 29	5431 24	5713 22	6006A 28
5114 21	5349? 21	5397 27	5436 29	5714 24	6021 24
5121 28	5351 24	5399 21	5447 27	5729 27	
5125 22	5354 23	5403 28	5453 24	5737 25	
5139 24	5362 22	5405 28	5459 24	5750 22	
5140 25	5363 22	5406 28	5555 22	5753 21	F. P.

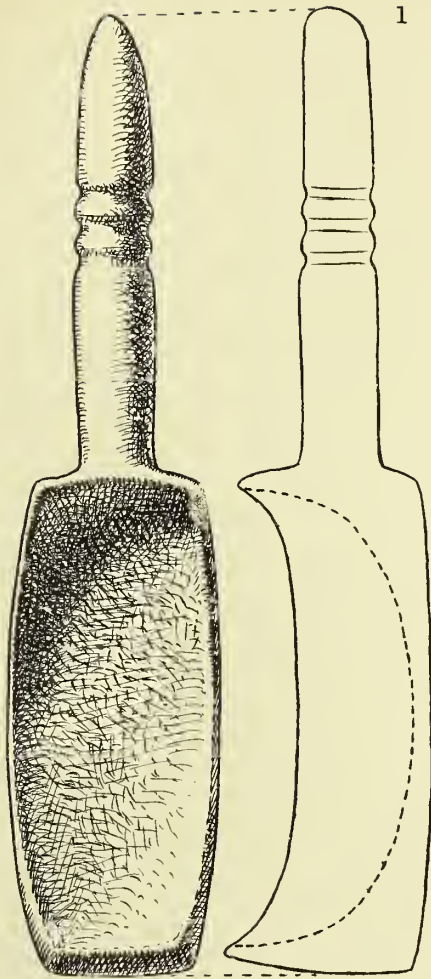
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



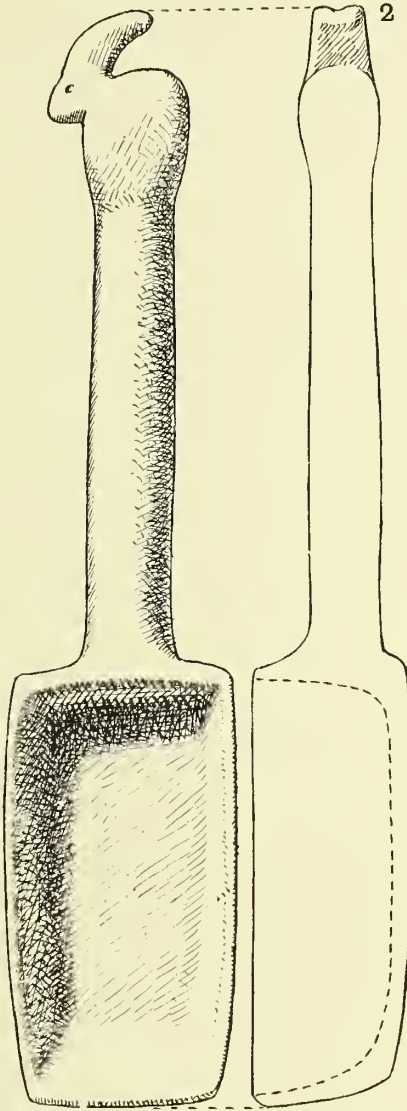
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



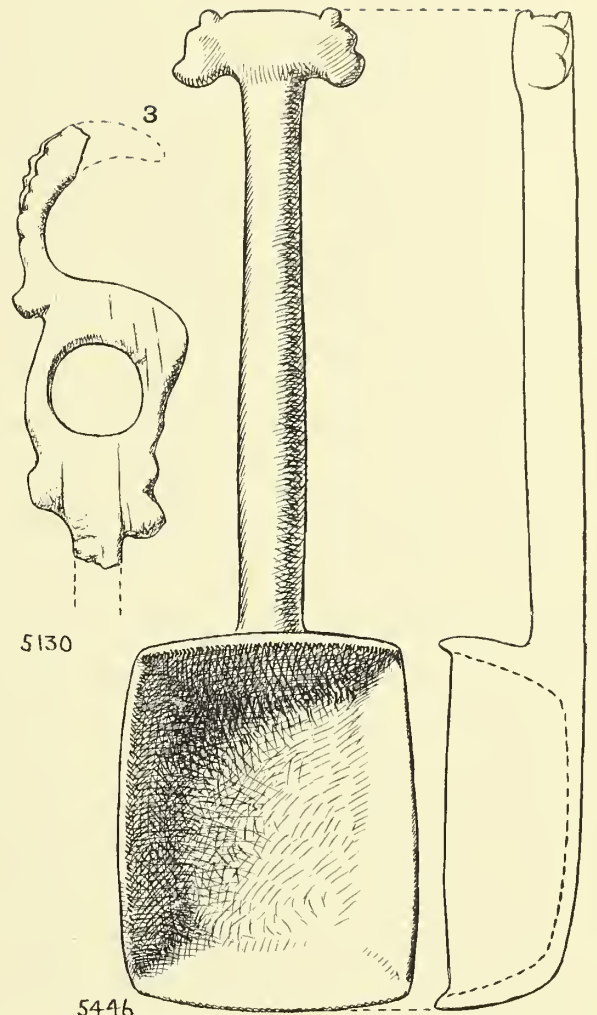
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



5719

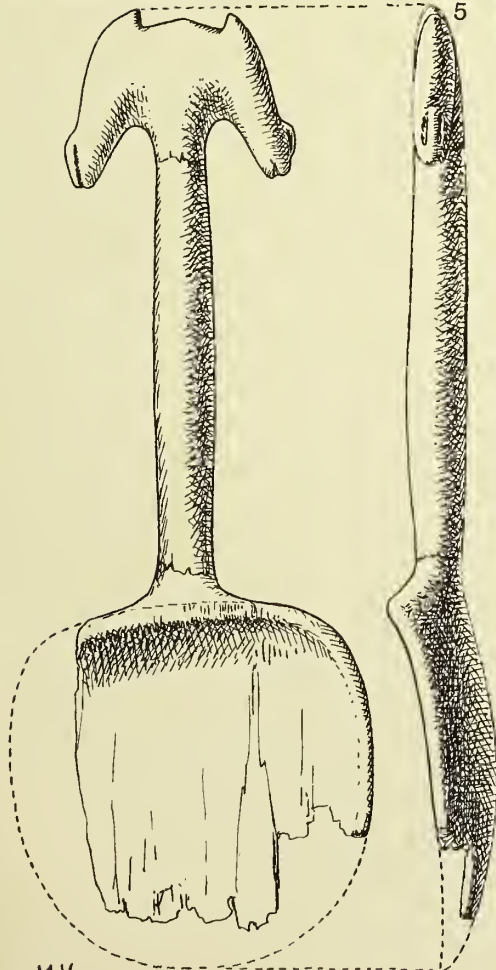


5745

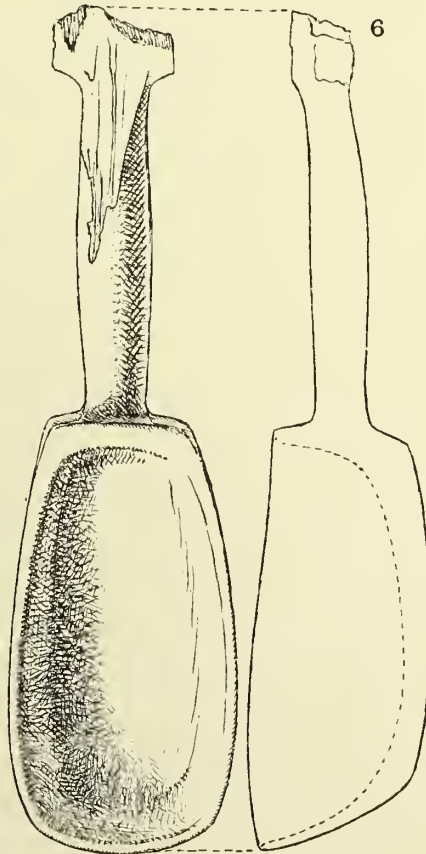


5130

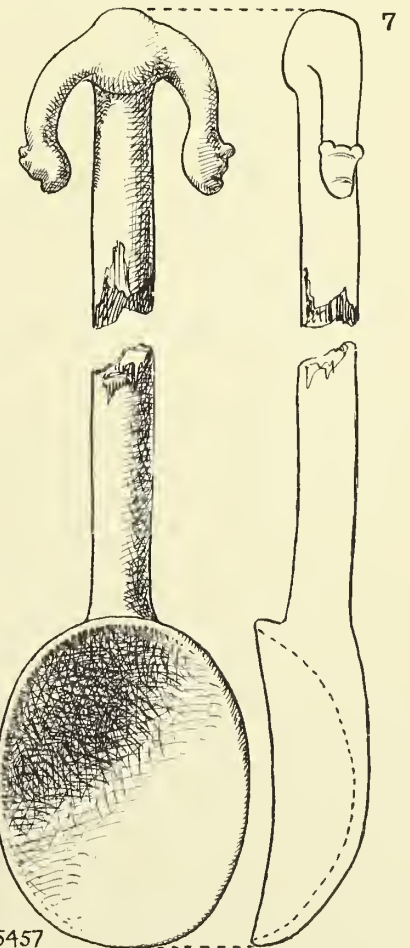
5446



1416

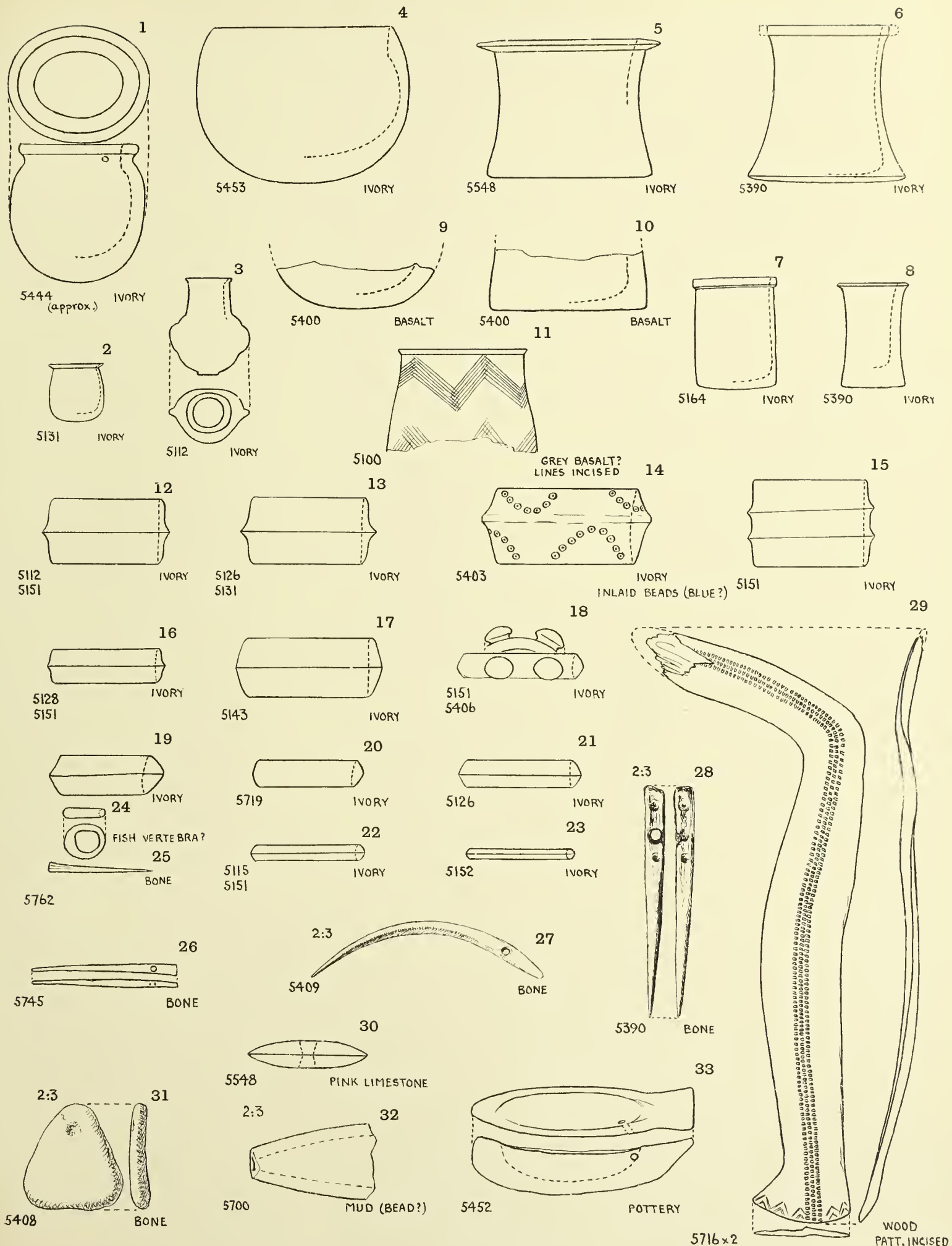


5104
5130



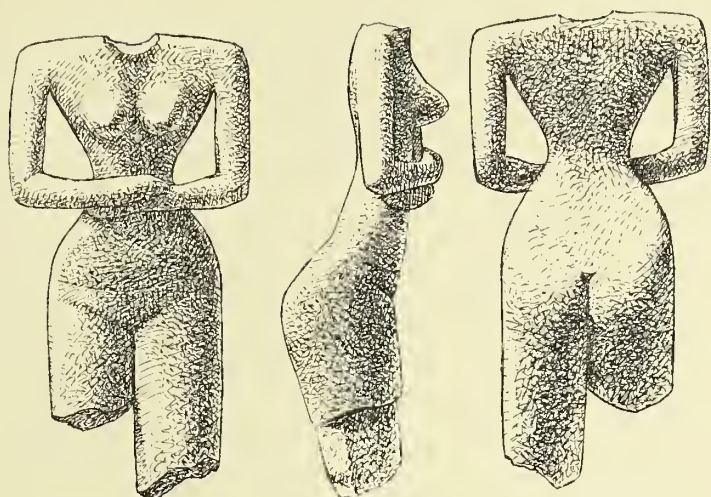
5457

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

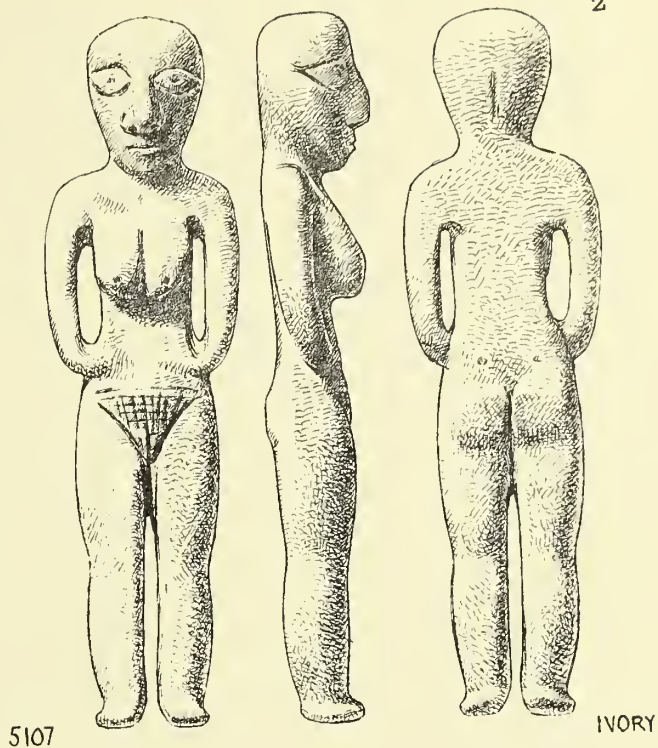
1



5227

POTTERY
PAINTED RED

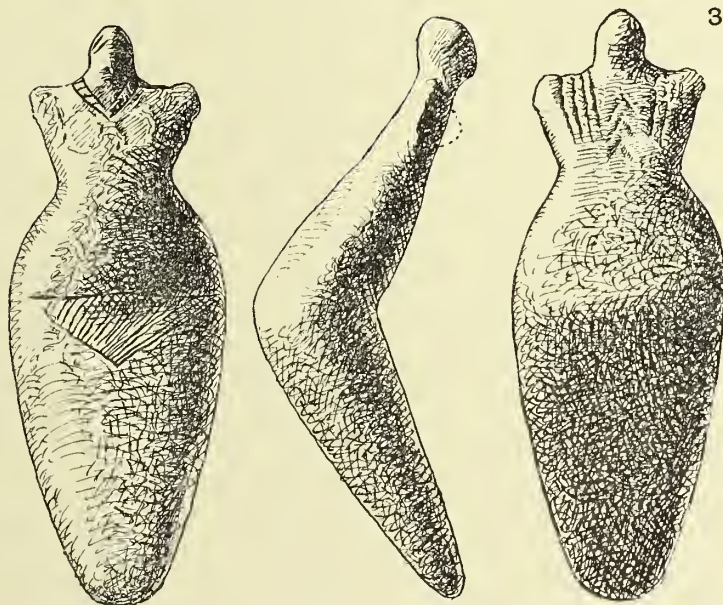
2



5107

IVORY

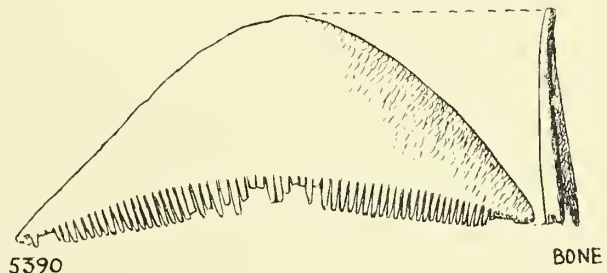
3



5769

GREY UNBAKED CLAY

4



5390

BONE

7

5104 FINE BLK.
CLAY

10

5155 FINE BLK.
CLAY

4:3

13



5359

PALE GREEN
STONE

8

5112 FINE BLK.
CLAY

11

5112 FINE BLK.
CLAY

9

5151 FINE BLK.
CLAY

12

5143 FINE BLK.
CLAY

5409

BONE

15



5740

BONE



5118 IVORY

16



5213

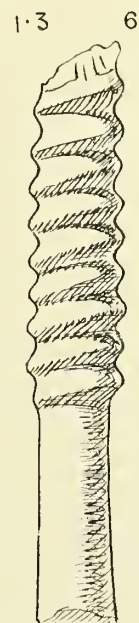
SEA-SHELL

17



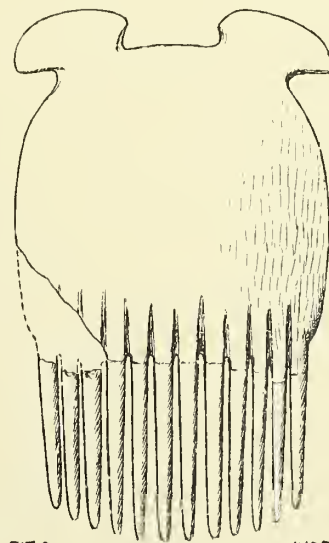
5164

IVORY



5143 x2 IVORY

18



5130

IVORY
curved to fit head.

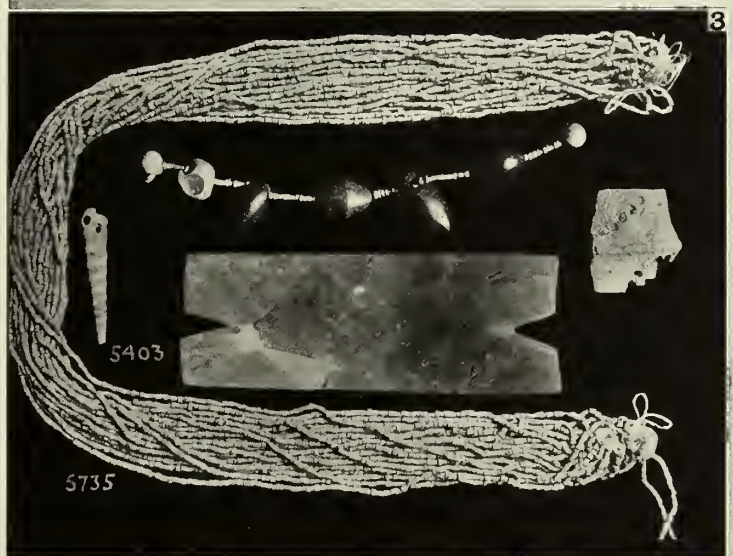
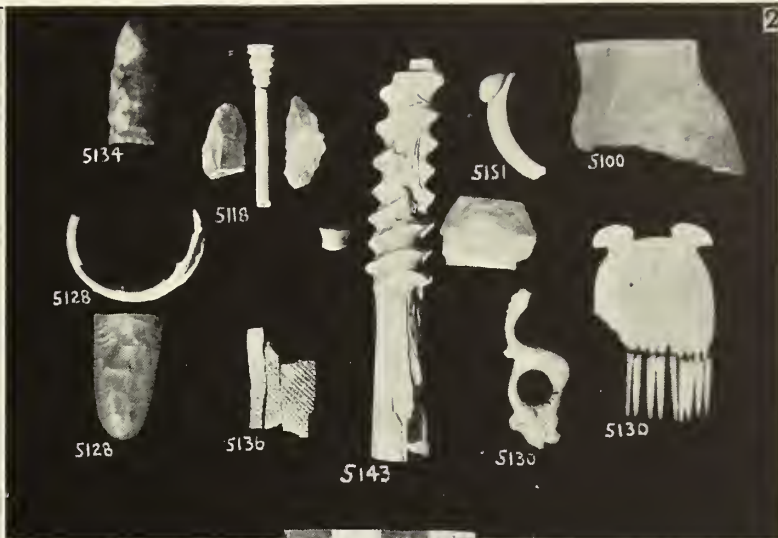
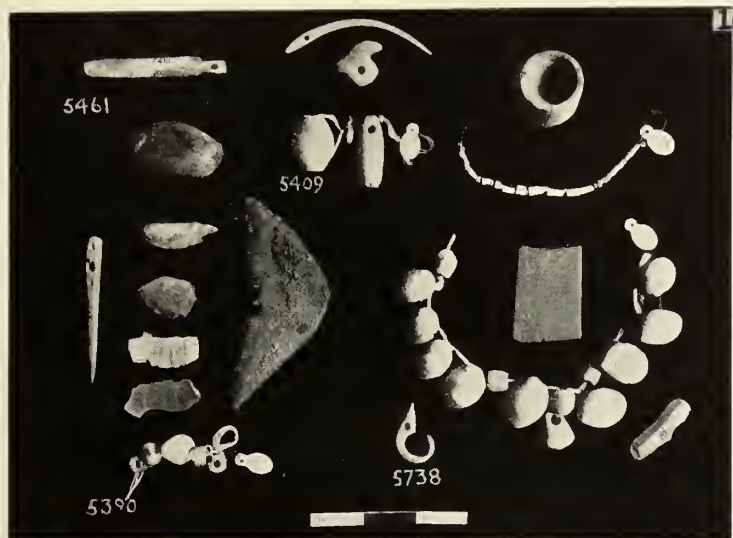
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



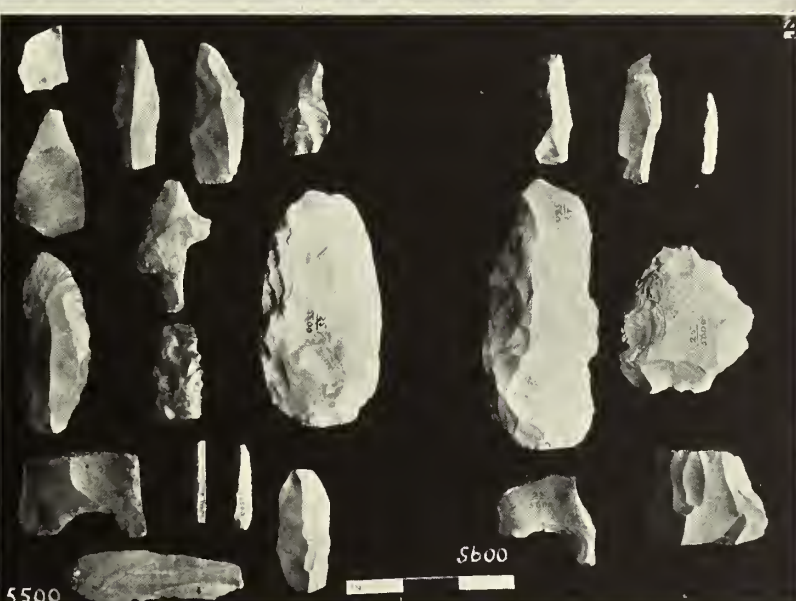
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



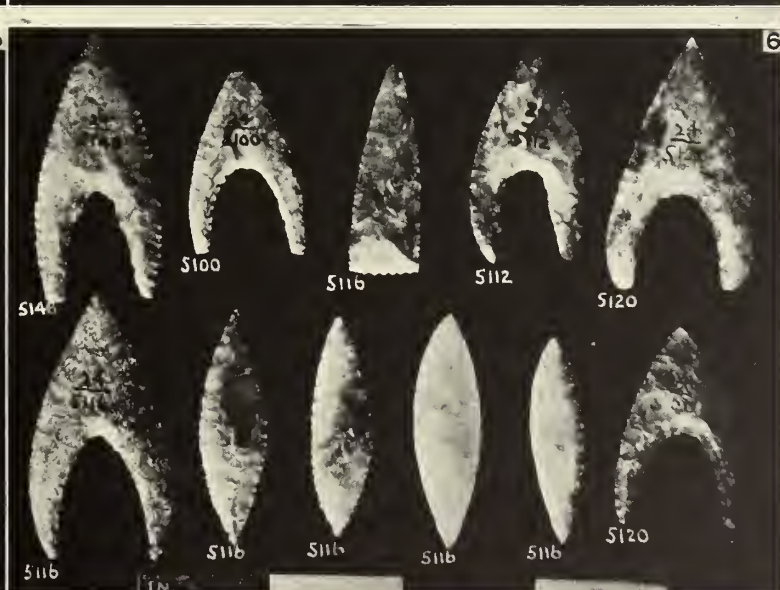
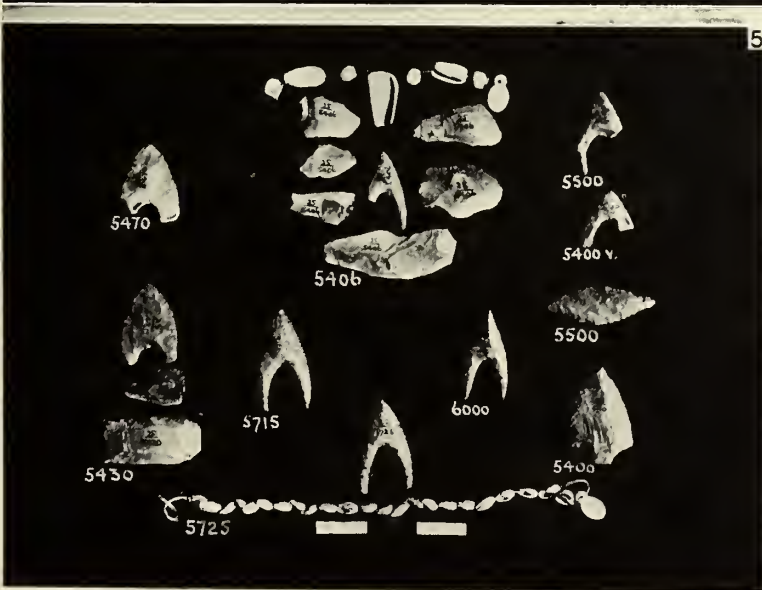
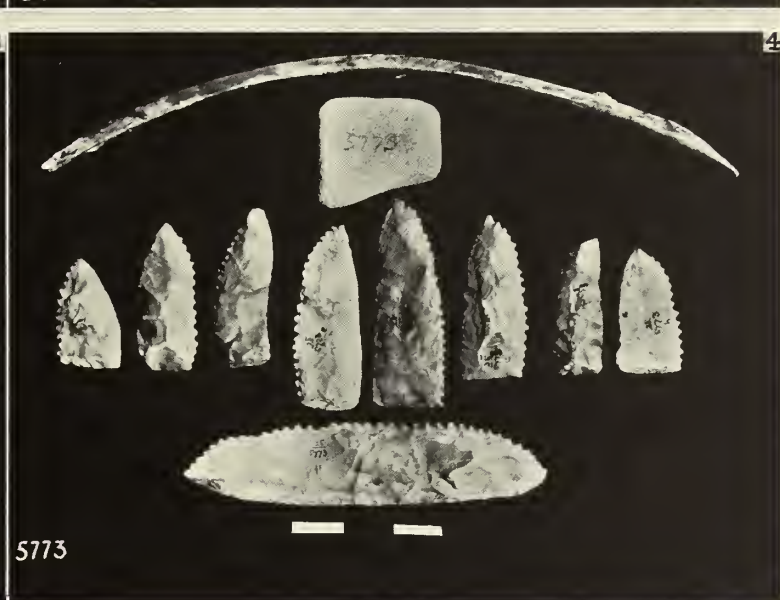
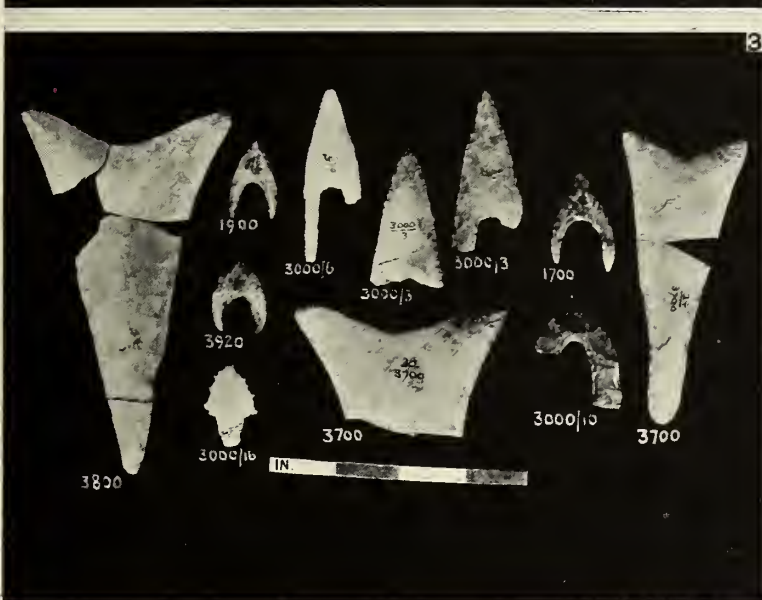
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



17 21
6 06
UNIVERSITY OF ILLINOIS



LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

TOMB NUMBER	GRAVE N. E. D.	AZIMUTH	HEAD	SEX	POTTERY. PLATES XXXV-XLVI							BEADS Plates XLIX-L		STONE VASES PLATE LI	SLATES PL. LI	OTHER OBJECTS.		SEQ. DATE	DISTURBED	SEE SECTION	TOMB NUMBER
					B	P	F	C	W	D	R	L									
1	29 25 32			M													17k	MATTING: MALACHITE	77	Q	1
2	40 50 18				27c 57c	13f 15d					3def 36						91b	MATTING: FLAKE	37-8	Q	2
3	45 45				25b 57a									86f ₁₀				MATTING: COPPER PIN (CURLED END)	31-38	Q	3
101	36 90 38	162	S	F	53c	40h			47a		44w 67 81bde							3 SPATHA SHELLS: MALACHITE	70-71	P	101
102	40 55 33	165	S	M?														2 FLINT KNIVES, 13 MARBLES: MALACHITE	44-61	Q	102
103	26 40 30	150	S	F	12g													LINEN (Lx, 4): MATTING	37	N	103
104	30 40 30	150																WOOD	46-61	Q	104
105																		IVORY PIN		N	105
106	28 42 45	170	S		44d													MATTING?	79	P	106
107	27 40 18	165																MATTING?	40-45	Q	107
108	24 40 38	165	S	F	25e													MATTING	31-55	P	108
109	32 40 38	164																	52-58	Q	109
110	29 46 41	156	S	M	35f													MATTING: SMALL ANIMAL	36-51	N	110
111	28 47 38	137	S															MALACHITE: BONE PIN	39-57	P	111
112	23 31 20	167																BONE BRACELET	53-59	Q	112
113	31 51 54	4			57b	34e 40e												CLAY HEAD xxxiv, 6, Lii, 45: IVORY AMULET, Lii, 25	49-53	Q	113
114	34 41 54	143			27f 74a														34-46	Q	114
115	31 48 63	151			53b 75														43-70	Q	115
116	37 53 46	174																	44-73	Q	116
117		174																	74-77	Q	117
118	18 41 8	133	S	F														SKINS		N	118
119	30 43 36	148																MATTING: IVORY BANGLES Liii, 35, 39: MALACH: RESIN	33-37	Q	119
120	27 44 25	152																	33-37	Q	120
121	21 35 38	151																		Q	121
122	27 42 36	156																		Q	122
123	18 43 35	165																		Q	123
124	41 80 63	163			57b 58a	24m ₂														Q	124
125	46 51 40	160																		Q	125
126	33 51 63	152																		Q	126
127	21 28 36	157			74e															Q	127
128	26 36 51	5	S	M																Q	128
129	28 42 40	162	S	C		11f 40d ₂														Q	129
130	32 40 20	142			21o															Q	130
131	40 46 42	171																		Q	131
132	20 30 14	2																		Q	132
133	24 41 7	162	S																	P	133
134	30 42 20	168																		Q	134
135	32 40 14	172																		Q	135
136	32 57 45	155	S	F	16 ₂ 25b 75d															Q	136
137	HOLE 10																				
138	22 41 18	2	S																		
139	30 40 16	174	S	C																	
140	41 95 42	164																			
141	30 44 24	5	S	C																	
142	30 33 35	153	S	F																	
143	33 42 28	157																			
144	38 33 40	109	E	M																	
145	59 86 35	136																			
146	35 35 35		SW	F																	
151	21 26 20	175	S																		
152	24 31 24	143																			
153	45 32 38	15																			
154	36 50 30	140	S																		
161	27 36 28																				
162	24 40 15	144	S	F																	
203	40 70 55	160																			
204	40 70 55	160																			
205	60 45 50	180																			
206	HOLE																				
210	HOLE																				
212	27 51 60	155	S	F	11a																
213	51 103 80	140			22c																
214	38 80 80	10																			
215																					
216	45 60 80	155			53c	24n															
217	25 40 75	140																			
218	60 75 80	165			53b	11f															
221	33 59 58	140																			
222	37 70 85	155																			
223a	23 33 56	170																			
8	30 42 54	160																			
1501	25 38 40																				
1502	25 42 30																				
1503	HOLE																				
1504	24 36 45	141																			
1513	31 44 56	131	S		36	40e	15c 83b														
1514	25 40 30	129	S	M																	
1515																					
1517	40 46 96	134																			

TOMB NUMBER	GRAVE	AZIMUTH	HEAD	SEX	POTTERY.							BEADS		STONE VASES PLATE LI	BLADES, PL. LI	OTHER OBJECTS.		SEQ. DATE	DISTURBED	SEE SECTION	TOMB NUMBER
					B	P	F	C	W	D	R	L	Plates XLIX, L			Plates					
1519	30				36d 57b ¹						17					PMK. LV, 14: 3 IVORY AMULETS	43-46	Q	1519		
1524	25 37 66	150								58 (handle R)		33n 36a					71-78	Q	1524		
1534	34 47 94	156	S		PROT. J. 73h ₂					80b	20b ₂ 24f	36				PERLE FOR SLATE: SHELL BANGLES	78	P	1534		
1535	45	158	S	F								89m				MATTING		N	1535		
1552	36				54a	40b						81f					49-54	Q	1552		
1579	17 24 25	180	S	C								65b					48-59	P	1579		
1604	HOLE 30											42k				MACE, Liii, 1	38?	103	1604		
1606	HOLE 35											42h				BONE HARPOON, xxxiv, 6, LV, 2: 5 SPATHA SHELLS	44-63	103	1606		
1617	33 42 31	127	S										30c				57-79	N	1617		
1623	40 63 90	123	M?		PROT. 50f (handle 49f)					80		85j	36a				79-80	Q	1623		
1624	30 45 33	140								43b		86f ₂ 3	12c				57	Q	1624		
1625	50				40d					42.43b		66a	19d 30d				62-66	Q	1625		
1629	28 48 34	131	S	F	82j						23f					PMK. LV, 10	44-60	N	1629		
																COFFIN 26x44x9?: LINEN: BASKET: 4 PEBBLES	44-60	N	1629		
1630	19 31 46	146	N	F												COFFIN 16x27x12		P	1630		
1636	30 45 30	169			45a						23d 24m 66b						48-53	Q	1636		
1643	52 27 75	144			97m					21k		30k 43b ₂					63-69	Q	1643		
1644	33 45 38	151									66a 83a	17m					67-77	Q	1644		
1645	56 33 46	80								71a (handle T, U)	28	36aw				COFFIN? 2 FLAKES: MALACHITE	78-80	Q	1645		
1646																TWO IVORY FINGER-RINGS: BANGLE: PIN		Q	1646		
1647	25 53 50	158														COPPER PIN, LV, 9: RIPPED KNIFE: FLAKE: MACE Lii, 13	52-61?	Q	1647		
1649	30 45 35	175								49k		72k				BASKET COFFIN: LINEN	31-34?	N	1649		
1655	36		S	M														Q	1655		
1657			S?	C												MACE, xxxiv, 5; Liii, 3	40?	Q	1657		
1659				M													56	Q	1659		
1660																	40-70	Q	1660		
1662	HOLE															MATTING	35-43	P	1662		
1664	30 48 36	150	S		58b													103	1664		
1665	HOLE 36																	Q	1665		
1666	HOLE 36																	Q	1666		
1667	HOLE 42																	Q	1667		
1670	32 38 40	150?														MAT: OSTRICH-EGG BOWL: PIN, xxxiv, 4, Liii, 20: COMB, Liii, 32	33-42	Q	1670		
1673																TWO SHELL BANGLES: RESIN	55-57	Q	1673		
1677	HOLE															MACE, xxxiv, 5; Liii, 14	43-48?	Q	1677		
1681	HOLE 60																	Q	1681		
1683	45																	Q	1683		
1690	36 45	5	S	M												MATTING: BONE NEEDLE, LV, 12	61-65	P	1690		
1692	32 47 82	28														BRICKS 12 1/2 x 6 x 4 1/2	69-75	Q	1692		
1702	40				40d ₂	58a										MACE, xxxiv, 5; Liii, 12	55-57	Q	1702		
1713		168	N	C	81a											MATTING: IVORY PIN: RESIN	44-45	N	1713		
1716	HOLE	151	N	C	11n											IVORY PINS, Liii, 21, 22, 23; xxxiv, 4	33-42	N	1716		
1728	HOLE 36																	Q	1728		
1741	34 46 40	142																Q	1741		
1743																		Q	1743		
1752	HOLE																	Q	1752		
1756		115			76m													Q	1756		
1772					93b	32b												Q	1772		
1773	20 20 51																	Q	1773		
1775	43 22 27	72			77b	16 ₂												Q	1775		
1777	24 39 21	155																Q	1777		
1787	14 30 15	138	S	C	25s ₂											SPATHA SHELL		Q	1787		
1790	HOLE 12		S	C												TWO IVORY AMULETS, Liii, 19	38	N	1790		
1807	HOLE				40e											5 SHELL BANGLES: MALACHITE: IVORY	53-59	N	1807		
1902	HOLE 53				62a ₂											TWO SPATHA: TWO BODKINS, xxxiv, 4: ANIMAL BONE	44-45	93	1902		
1903	HOLE				6p	97m										FLAKE, LVii, 2: GRAIN GRINDER	44-45	93	1903		
1904	HOLE 60				62m	83a												93	1904		
1967	HOLE 32																	93	1967		
1994	24 36 36	135	S	M												BADARIAN?	44	P	1994		
2063	33															POT BURIAL	42?	N	2063		
2064	36															POT BURIAL: MACE xxxiv, 5; Liii, 6: FLAKE, LVii, 2: TUSK: POTTERY DISK	40?	N	2064		
2065	HOLE 33				12g 19c 25s ₂ 34g 62m ₂ 76b ₄											PMKS. LV, 44, 49, 50.	37-38	93	2065		
2070	HOLE 32				21g 25o													93	2070		
2074	HOLE 30				12g 18g ₂ n ₂	1a ₂ 2f ₂ 22a ₂					25f 44t					PMK. LV, 45	41-44	93	2074		
					21b ₄ 62d ₂													93	2074		
2075	HOLE 26				18b n 21b ₄ 25c ₂ 62a ₂ 2f ₂ 4d ₂ m ₂ m ₂ 83a b ₂													93	2075		
					16b														93	2075	
2078	HOLE 34				62d ₃											5 BONE AWLS	37-45	93	2078		
2085	HOLE				21b ₂ 63d ₂ 4d ₂ 27d 62d ₂											PMK. LV, 40	37-45	93	2085		
2089	HOLE																	93	2089		
2091	HOLE																	93	2091		
2094	74 20 33	63																Q	2094		
3002	HOLE															PMK. LV, 51	34	95	3002		
3149	HOLE 80															MANY OBJECTS, SEE TEXT. GROUP XLVII, 6	37-38	96	3149		
3165	HOLE 51															MANY OBJECTS, SEE TEXT. GROUP XLVII, 5	37-47	96	3165		
3167	HOLE 40																	96	3167		
3177	HOLE 76				21b ₂ 25c ₂ 31g 29c ₂ 62a ₂ 5 all black-tipped											BASKET, LX, 12	37-44	96	3177		
3197	HOLE 35				21d ₂ 22c	28a ₂										COFFIN 10x21x?: MAT?	60-68	N	3197		
3199		153	S	C														96	3199		

UNIVERSITY OF ILLINOIS

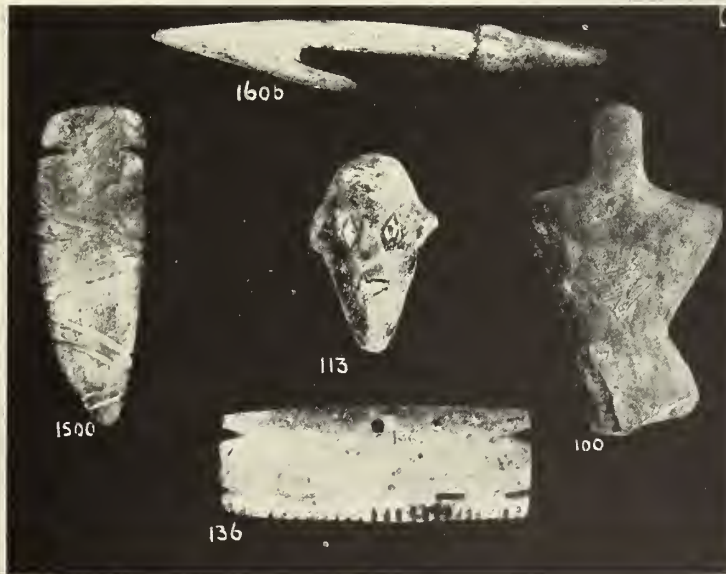
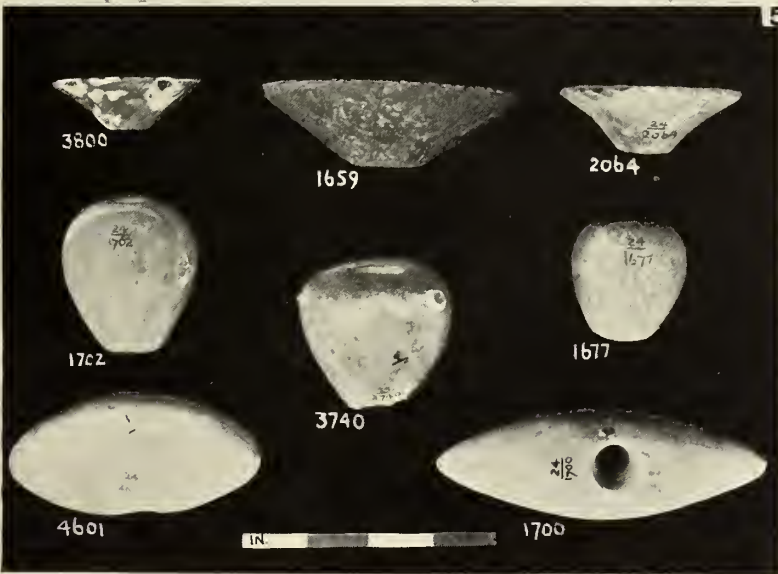
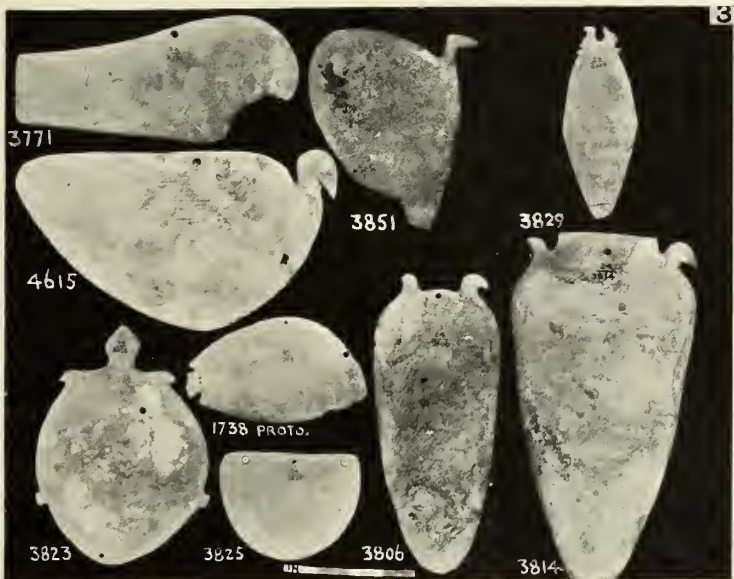
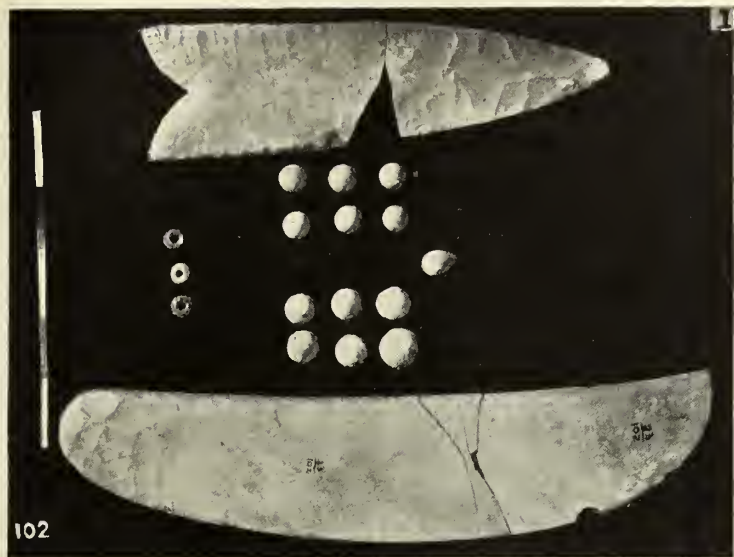
[illegible]

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

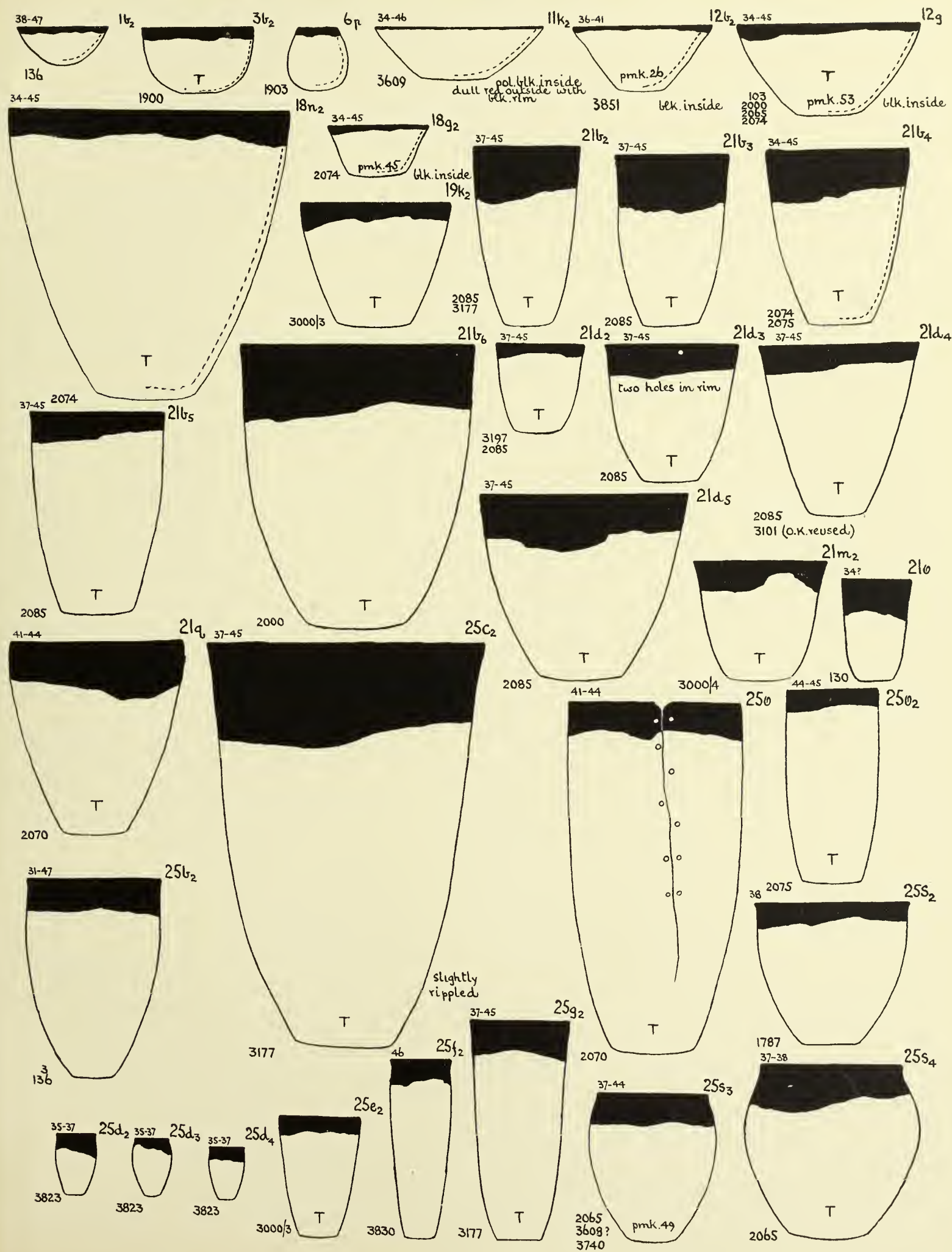
XXXIII

[illegible]

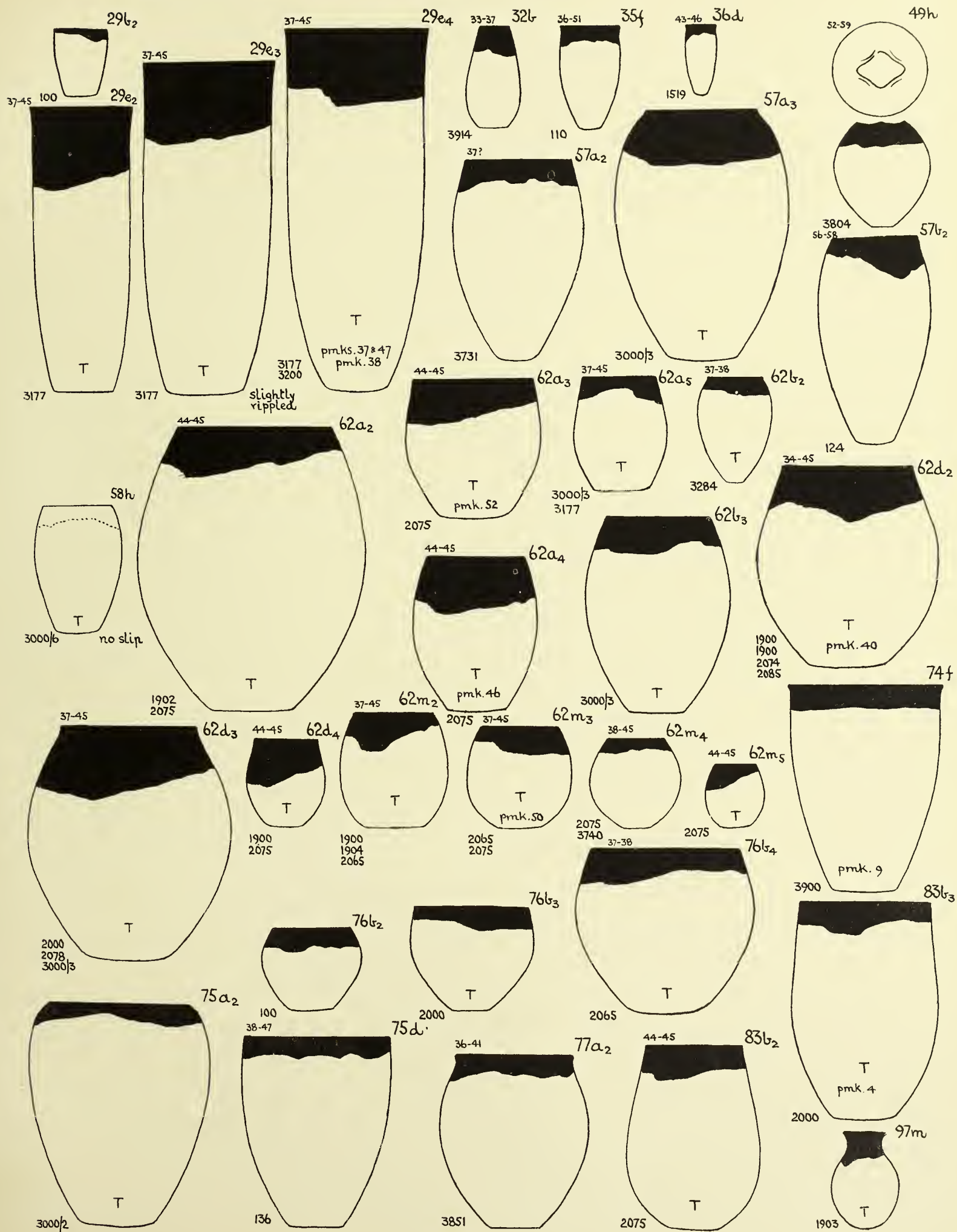
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



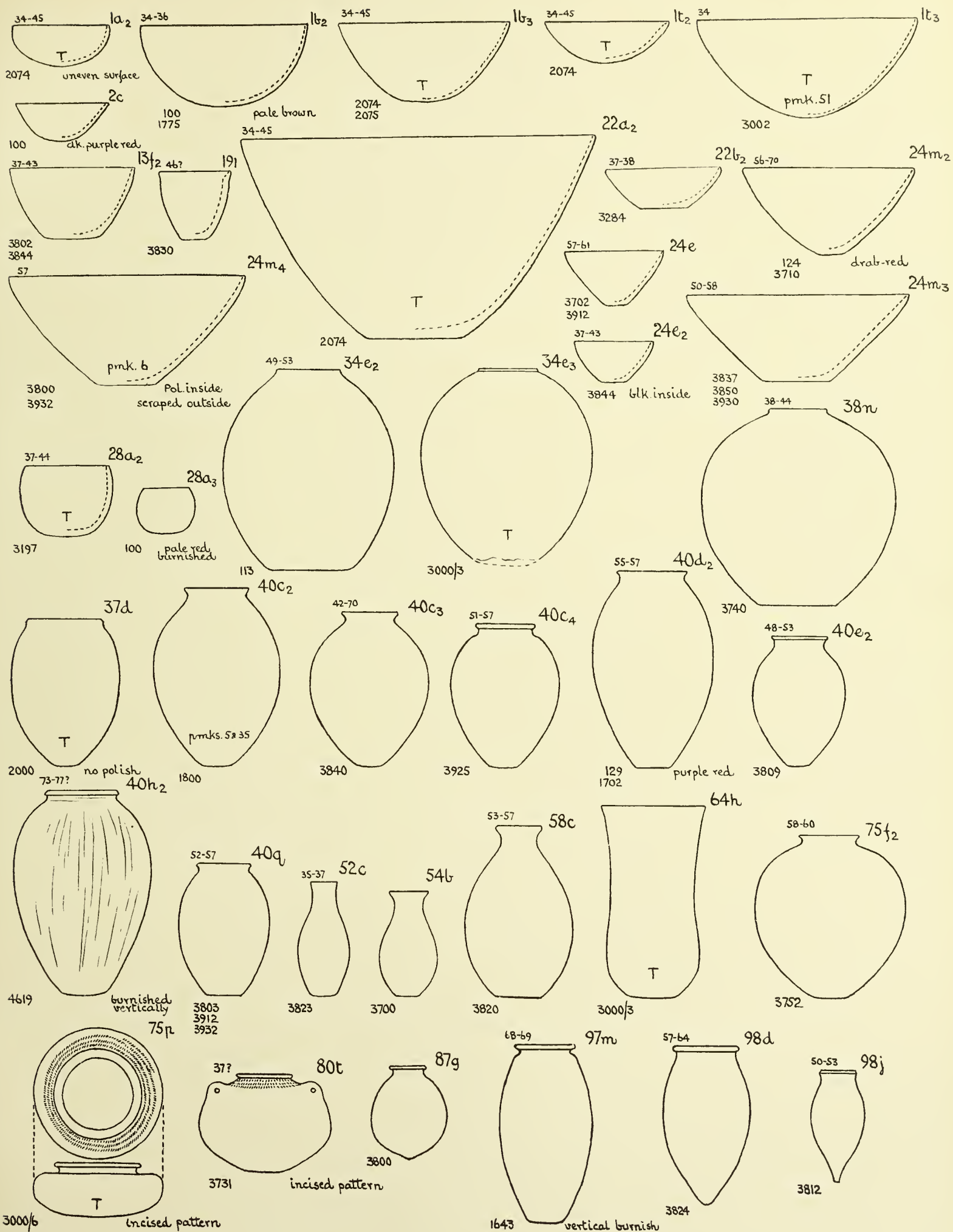
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



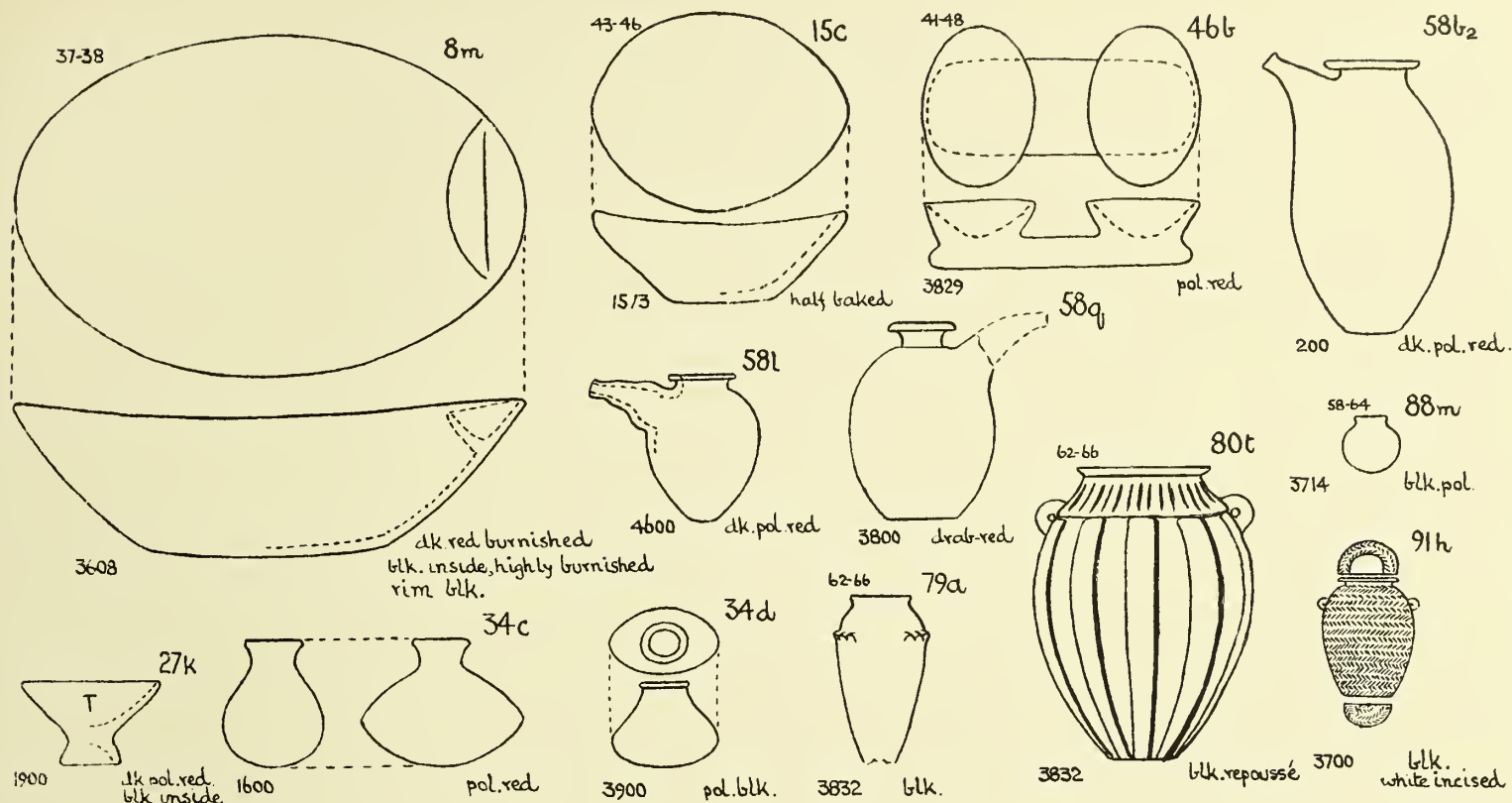
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



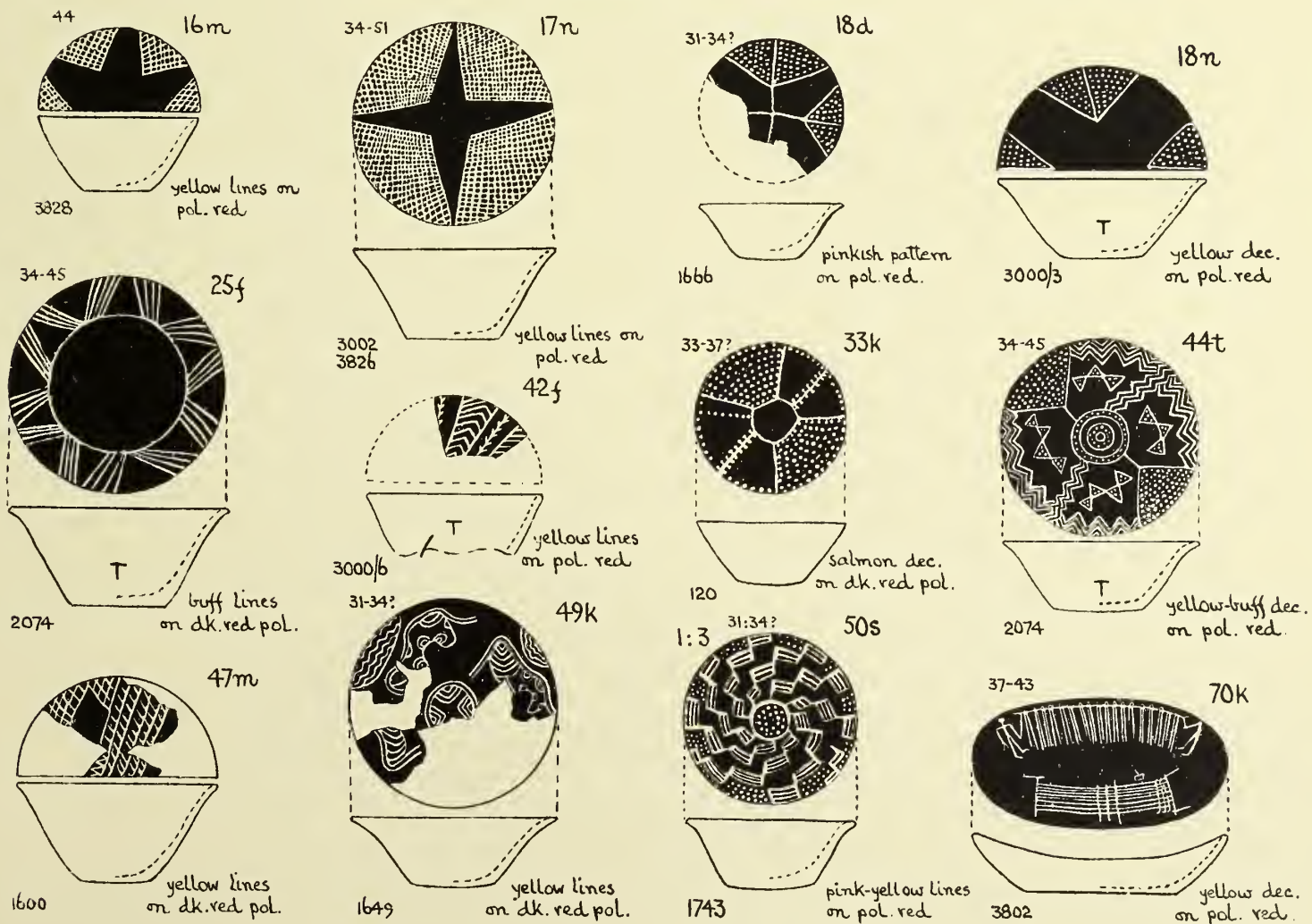
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



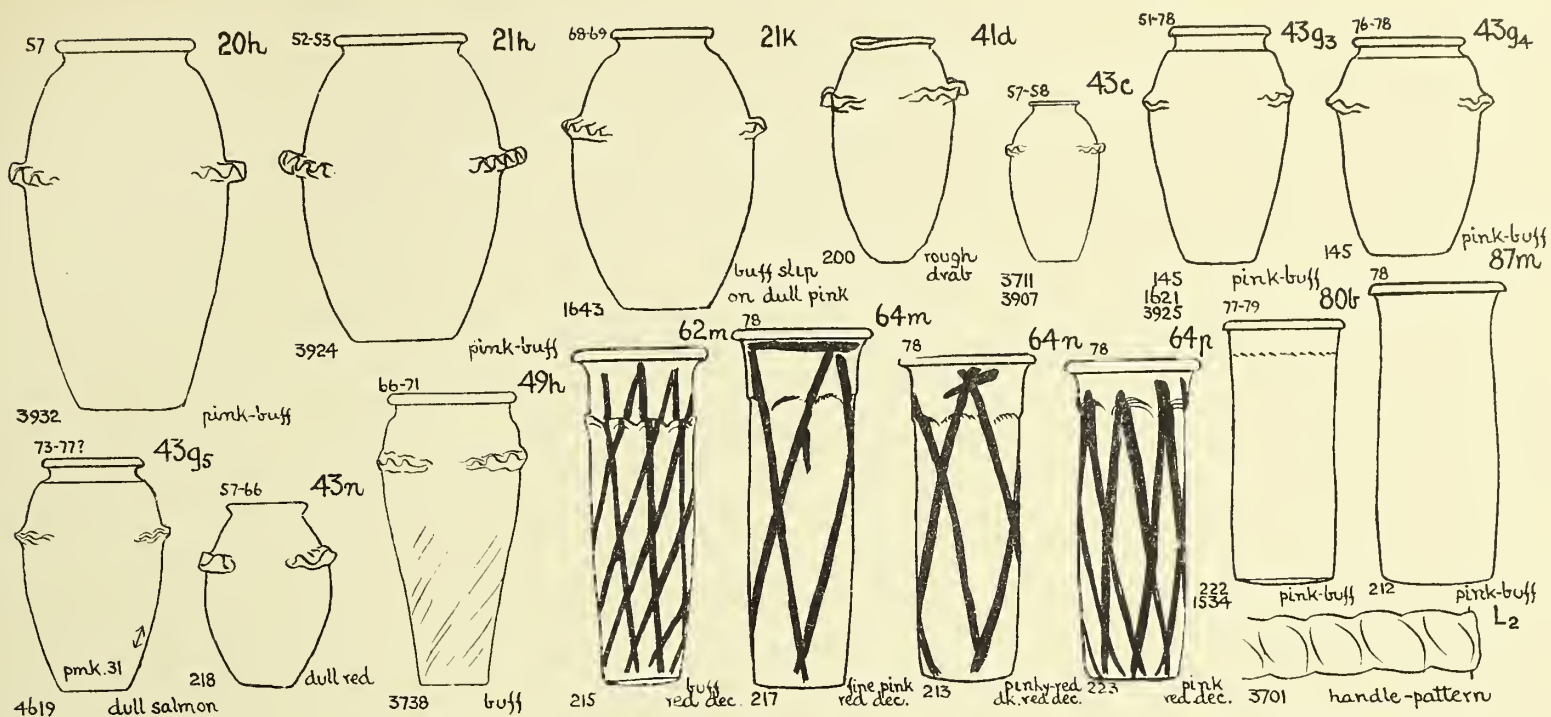
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



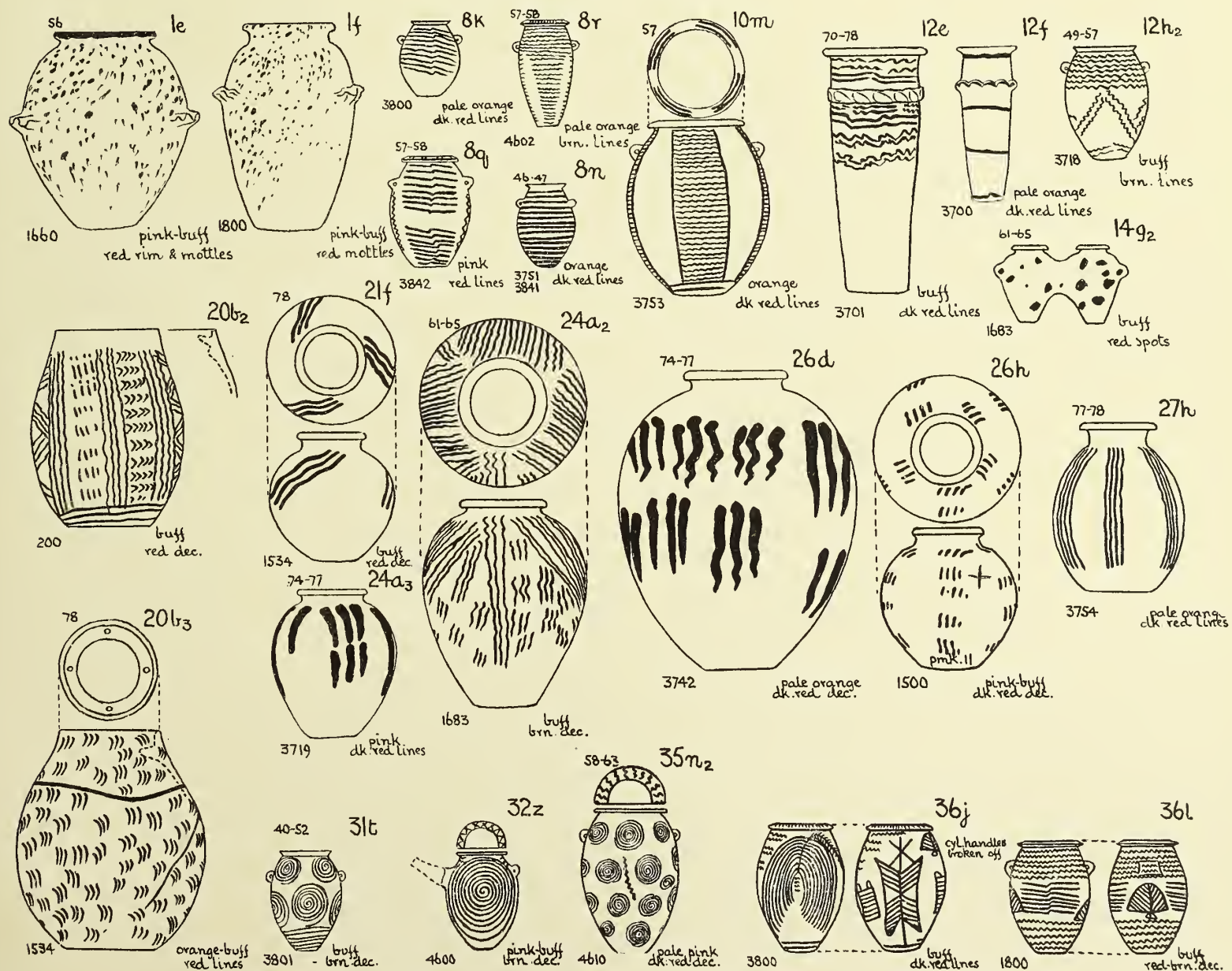
WHITE CROSS-LINED, C1-99.



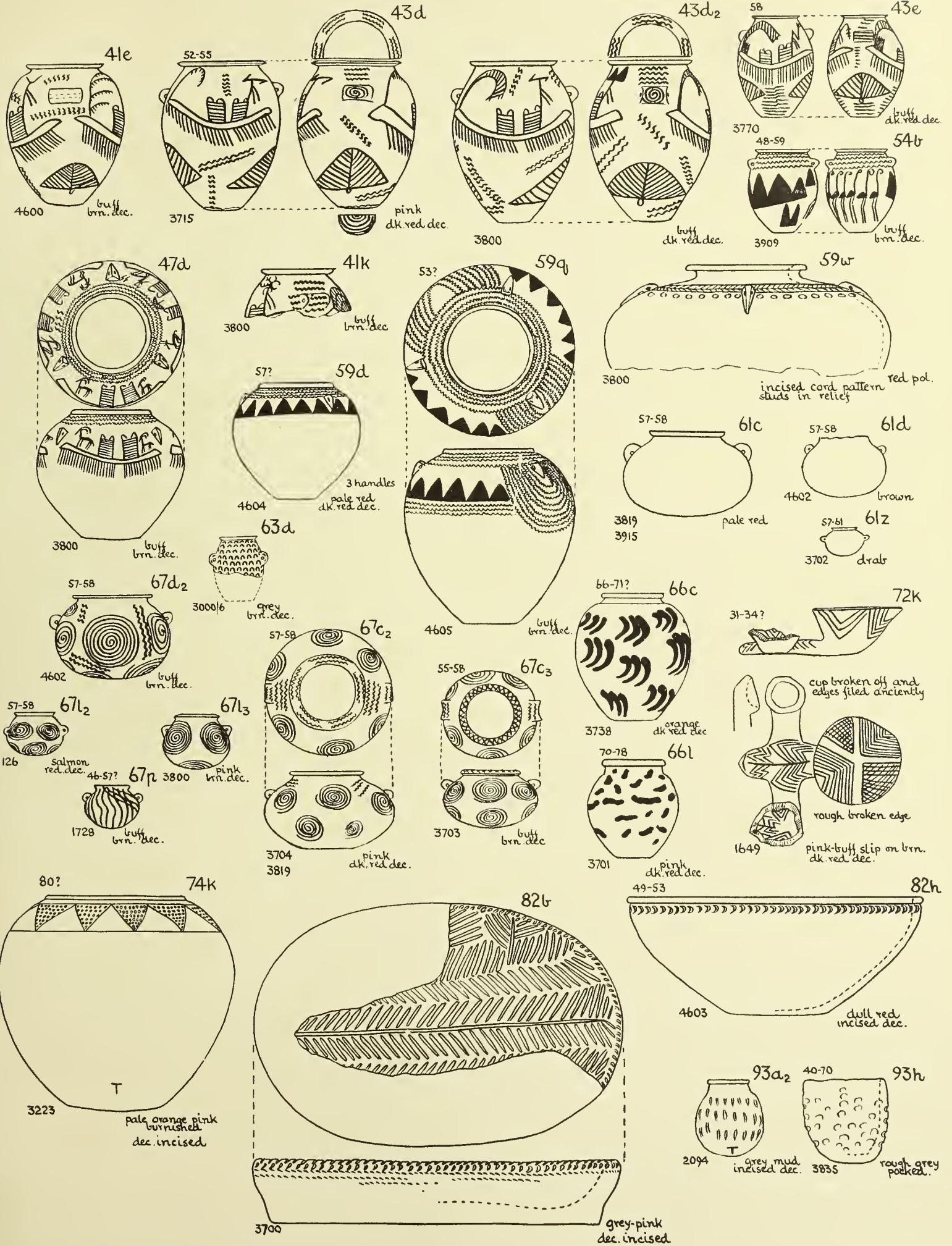
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



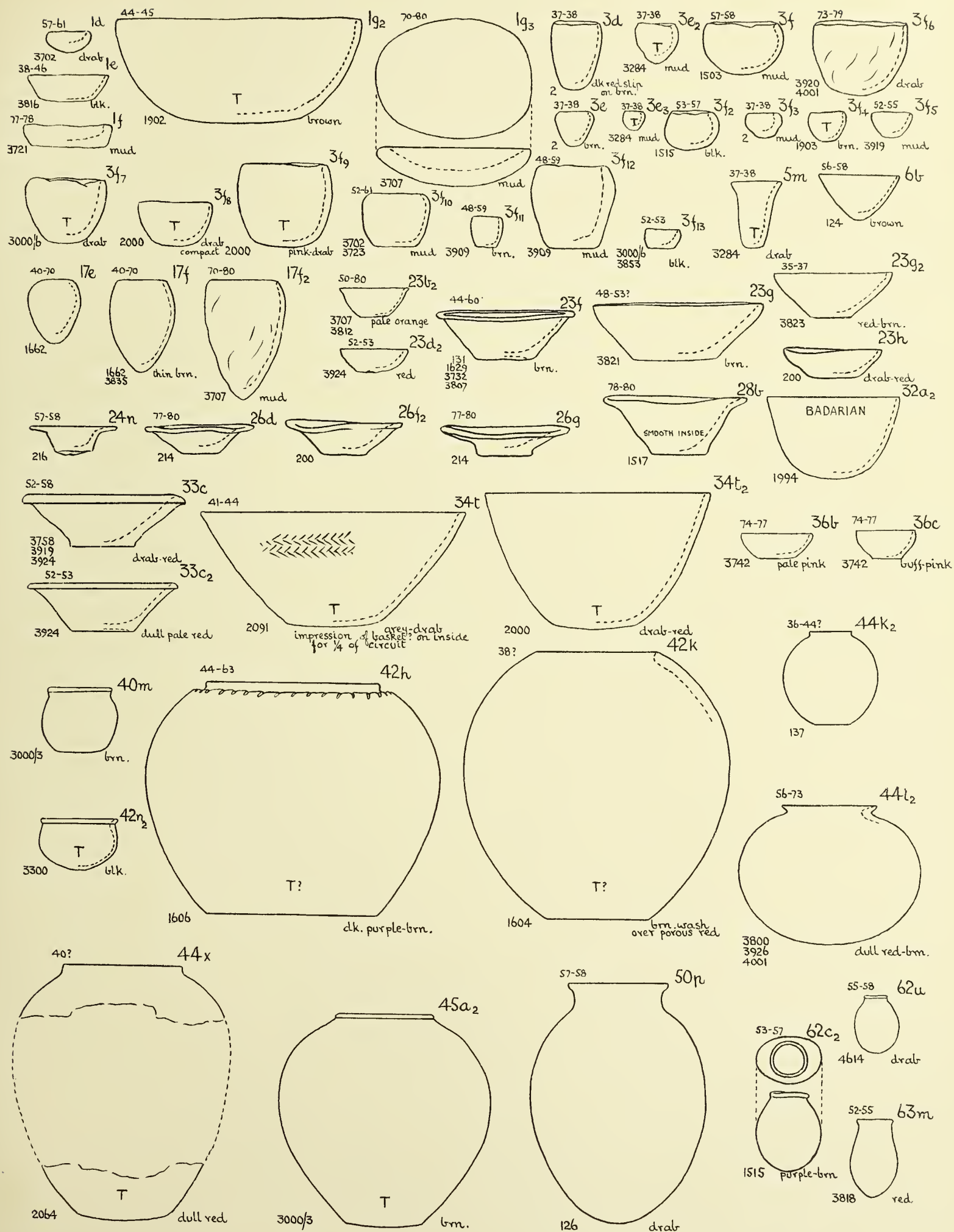
DECORATED, D 1-36.



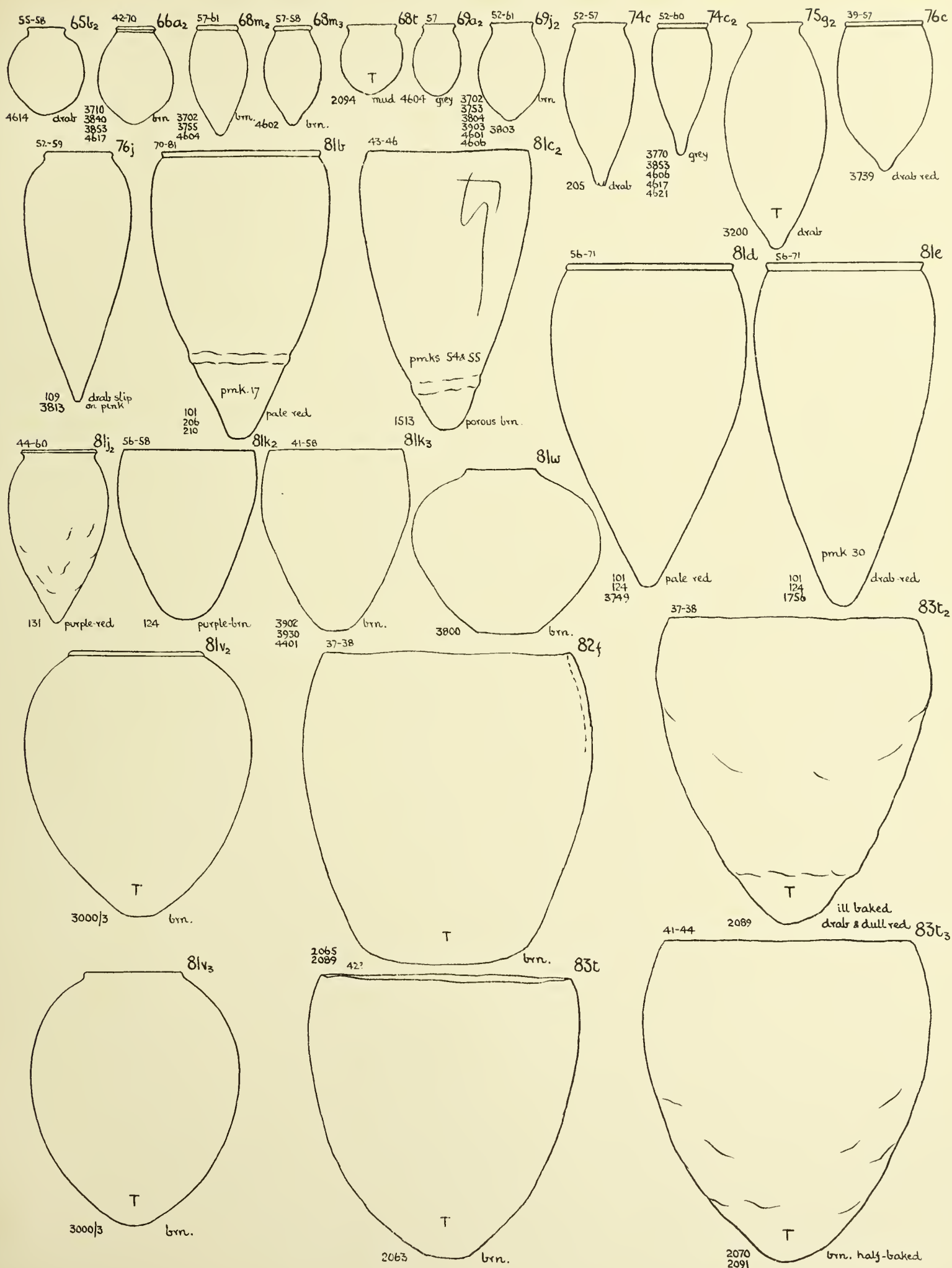
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



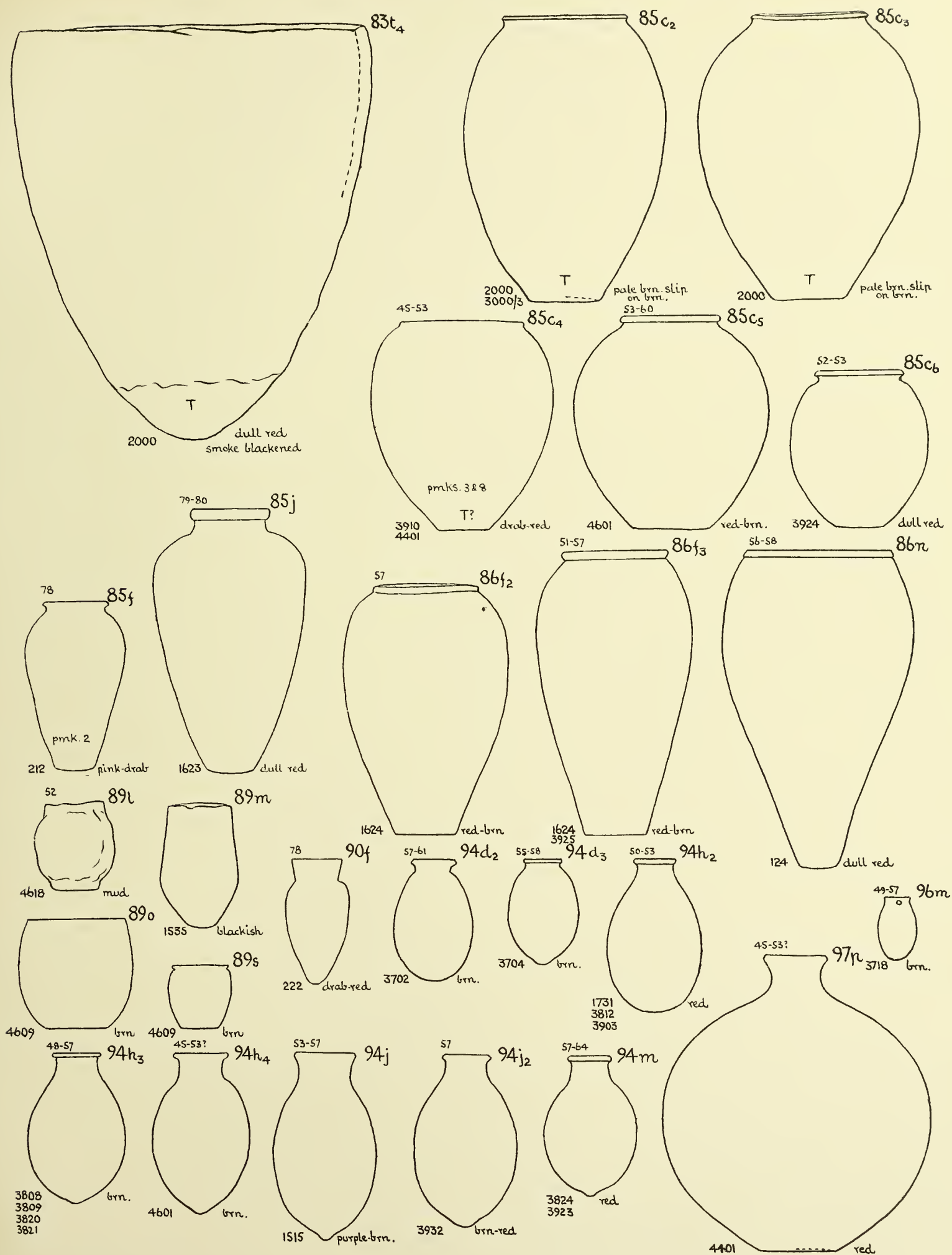
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



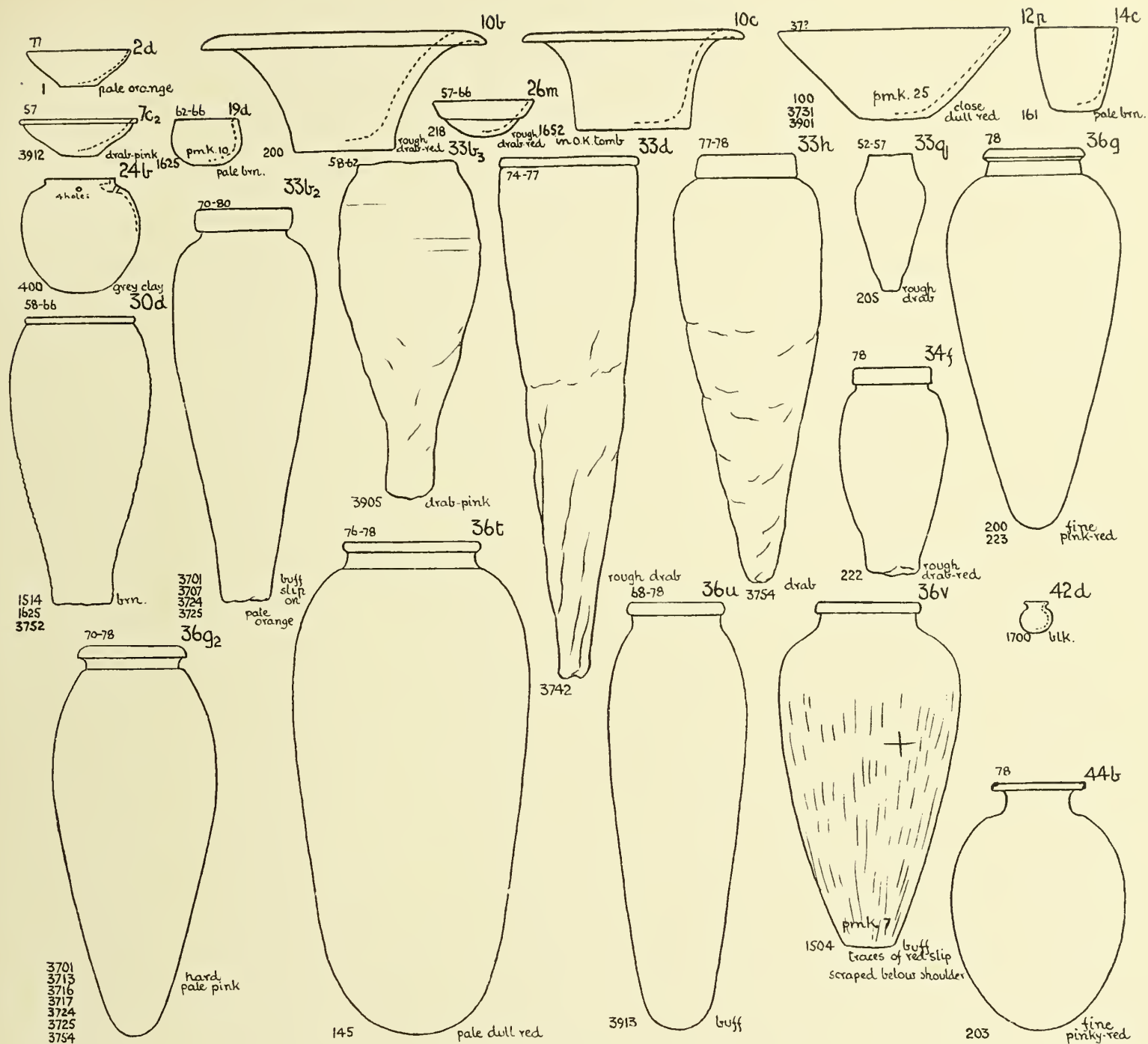
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



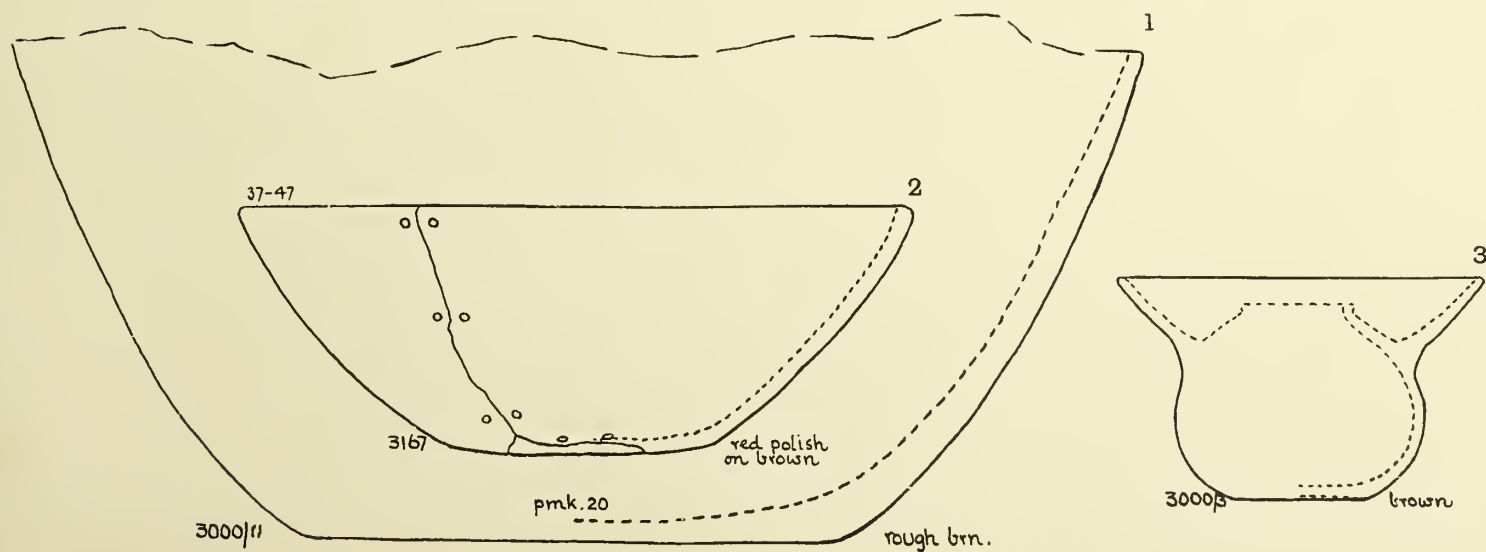
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



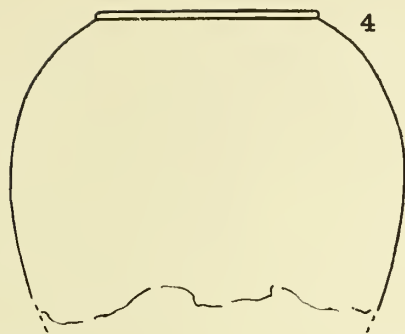
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



PREDYNASTIC TOWN POTTERY, T1-3.

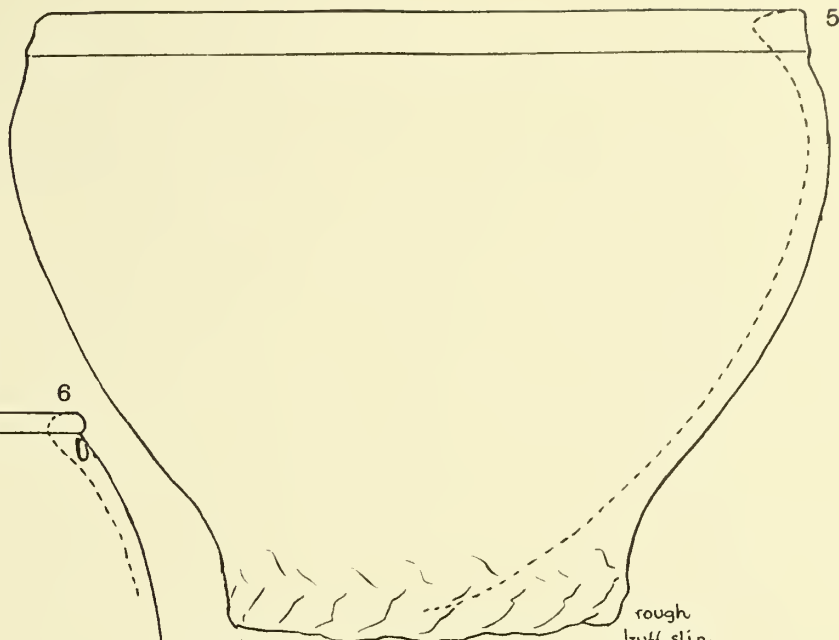


LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



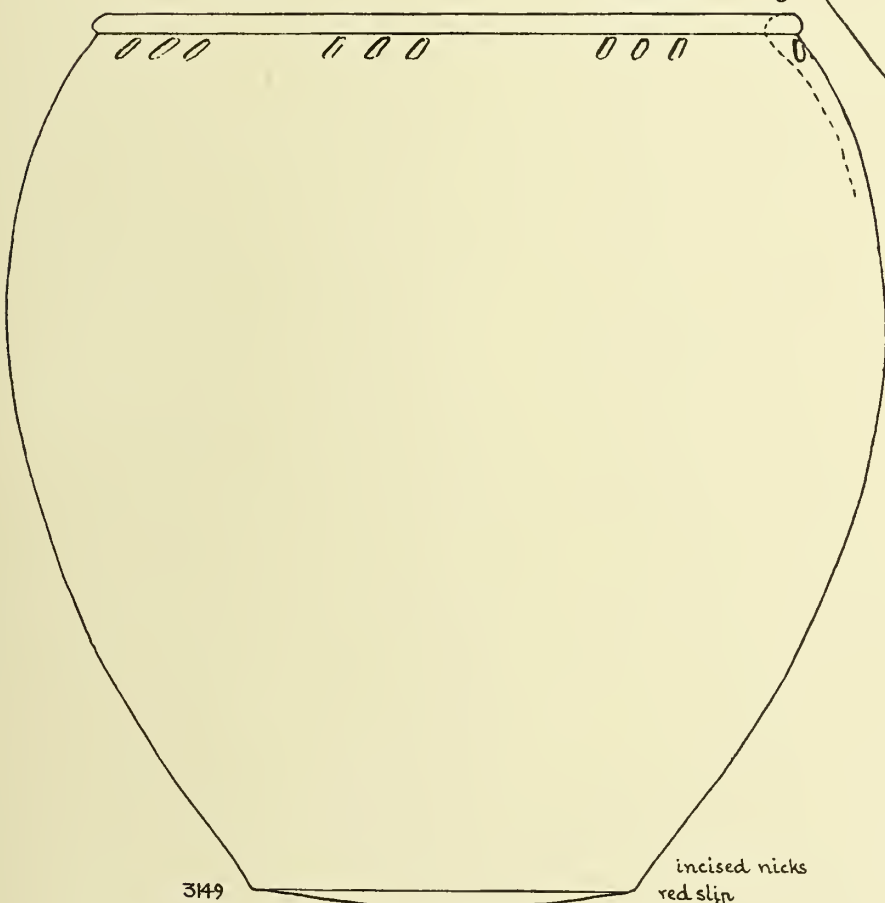
4

3000/3

red polish
on brown

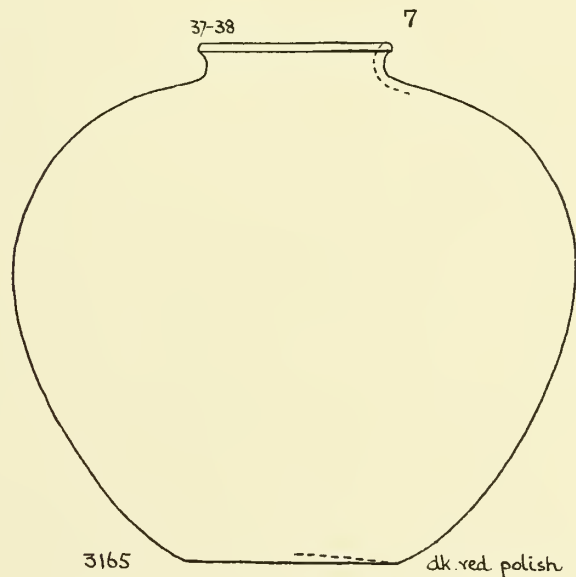
5

3000/6

rough
buff slip
on red

6

3149

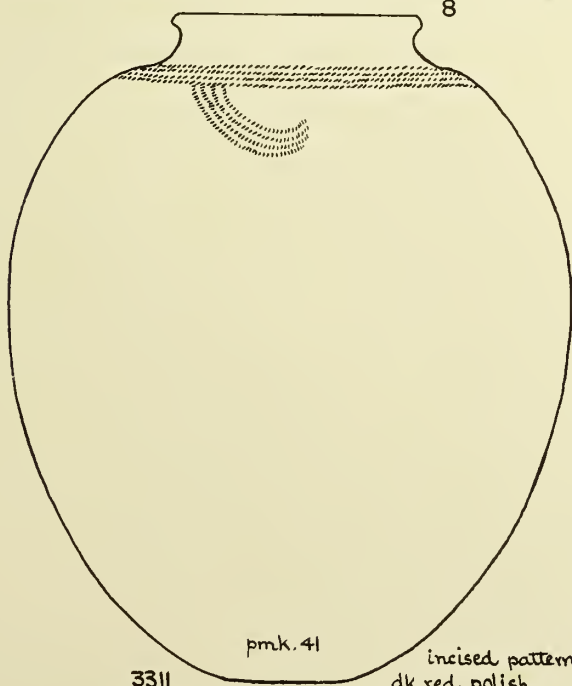
incised nicks
red slip
on red

37-38

7

3165

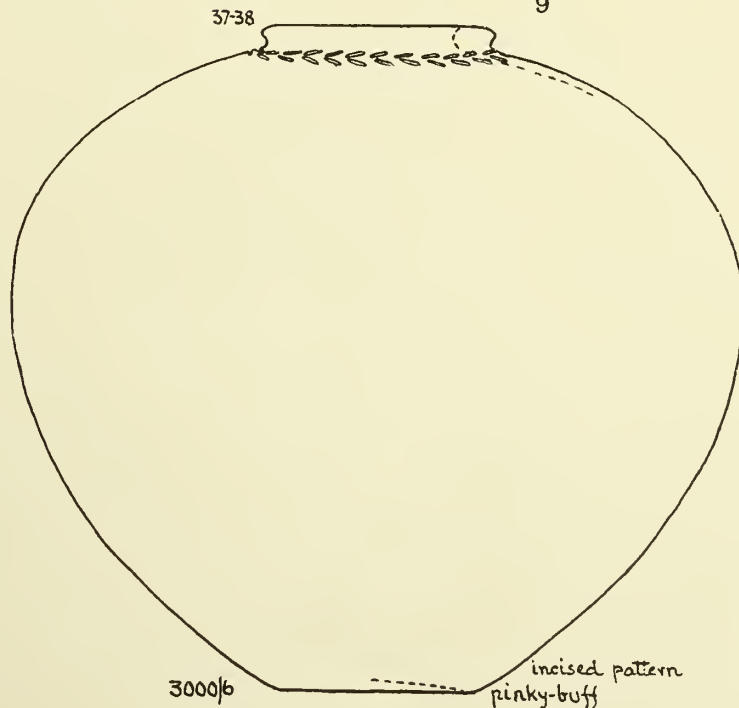
dk. red polish



8

pmk. 41

3311

incised pattern
dk red polish

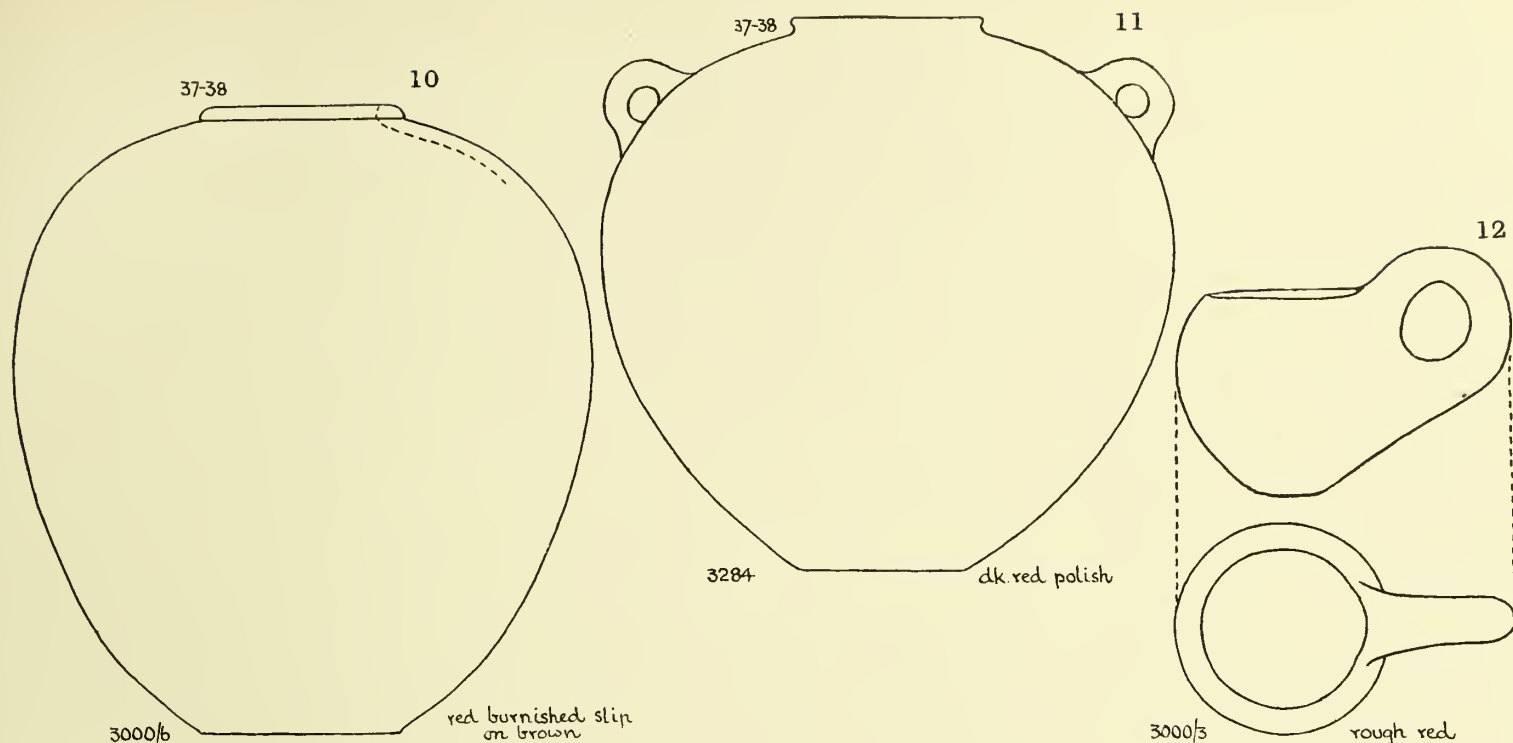
37-38

9

3000/6

incised pattern
pinkish-buff

LIPPARY
OF THE
UNIVERSITY OF ILLINOIS



POTTERY TYPES PUBLISHED IN PREHISTORIC CORPUS.

BLACK TOP.			POLISHED RED.			FANCY.			ROUGH.			WAVY HANDLED.			LATE.																													
11E 2000, 3722, 3922	F 3736	N 1728	15 3922	18B 2075	N 2075	19E 2065	K 3000	21C 1900	22C 3197	25E 3, 108, 2000, 2065	H 3000, 3A, 3823	27C 2, 3910	D 2085	E 3731	F 114, 3609	35B 3740	C 3826	36 1513, 3759	39A 3730	44D 106	F 3731	S 3816	47 3816	50 3826	53B 115, 218, 3804, 3833	C 101, 200, 216, 3736	54A 1552	55B 1500, 3802, 3804	57A 3, 3730	B 113, 3609, 3802, 3804	C 2, 3910	G 3722	58A 124	B 200, 1664	62A 3753	68B 3731, 3804	74A 114, 3801, 3822, 3902	B 3739, 3844	E 127	75A 3728	B 3000	76M 1756	77B 6005	
81A 1713	83A 1904, 2075		1B 3802	2A 3803	11A 210	B 3702	D 3806	F 129, 218	13F 2	15D 2	21B 3824	22A 3730	B 3710	C 212, 3710	23A 1237, 3816, 4616	C 200, 3803, 4618	24G 3924	K 3826, 3925	L 1501	M 3820	N 200, 216, 1503, 3000, 4616	26B 3730	34E 3814	40A 3706, 3729, 3744, 3753, 3850	B 1552, 3729, 3770	C 3700, 3915	D 1625, 3755	E 113, 1513, 1807, 3751, 3824, 3924, 4617	H 101, 3800	41C 200, 205	45A 1636	46K 3760	47A 3200	56B 3924	57A 3800, 3818	68A 133	77B 1775	80S 3912	81A 1600, 3905	82C 3802	J 223A, 1629	84C 4601	85A 112	
93B 1772, 3809	D 1662	95A 3824	B 112, 3800	98A 3749	B 3806	12 3740	32B 1772	58A 1702	F 1667?	80A 3300	83B 1513	3D 3800, 3808	19 200, 3700, 3804, 3824, 3924	41G 216	42 100, 1625	43B 100, 145, 1624, 1625, 3706, 3744, 4620	G 200	M 1673, 3911	44 3726	47A 101	M 145	55 3725	56A 200, 3707	G 200	58 200, 1524	60G 3719	61 203	62 200, 3713, 3716, 3717, 3720	71A 200, 213, 1517, 1645	80 200, 1623	85 3721	8G 1600	10 K 3805, 4616	27G 3733	31B 107, 3800	36A 3800, 4607	59T 200	61B 3700	K 4615	66B 1692	C 3800			
67A 129	C 3755, 3800, 3807	D 1600, 3912	J 1756	L 3800	68A 3800, 3800	1B 3840	C 4614	3C 3909	17 1519, 3702	22A 126, 218, 3000, 3000, 3702, 3718, 3744, 3824	B 100, 116	23A 116	B 3817	C 3704, 3805, 4612, 4614	D 1636	24A 117, 200, 212, 3723, 3771	B 4613	M 200, 1636	26C 203, 3703, 3805	F 200	28 1645	33A 4601	B 206, 1513, 4608	34C 123, 3830	36 2, 200, 204, 1534	44C 3749	M 3915	W 101, 3827	45A 3753	62 3926	S 3733	65A 3199, 3752, 3909, 3925	B 1579, 1660, 3300, 3815, 3903	C 1501, 1502, 1514, 1773, 3199	4406, 4611, 4616, 4619	D 3300	66A 126, 221, 1625, 1644, 3912, 3931	B 1636, 3809	M 3770, 3805, 3915	P 111, 3739, 3912	67 100, 101, 117, 210, 3729, 3744, 3752	68A 3805, 3915		
68M 3833, 3853, 3903	69A 3703, 3804, 3841, 4613	B 3807, 3837, 3850, 3901, 3915	C 1728, 1731, 3801, 3806, 3808	3820, 3824, 3915, 4603, 4606	D 3300	66A 126, 221, 1625, 1644, 3912	B 1636, 3809	M 3770, 3805, 3915	P 111, 3739, 3912	67 100, 101, 117, 210, 3729, 3744	3752, 3925, 3931	68A 3805, 3915	M 3833, 3853, 3903	69A 3703, 3804, 3841, 4613	B 3807, 3837, 3850, 3901, 3915	C 1728, 1731, 3801, 3806, 3808	3820, 3824, 3915, 4603, 4606	D 3730, 3817	H 113, 4603	R 200	71B 212	74A 3704, 3837, 4607	B 3704, 3837	D 3924	75 115, 200, 221	G 3817	76D 3715, 3723, 3818, 3919	G 113, 3711, 3907	77 218	81 3739, 3804, 3821, 3824, 3850	F 113, 1552, 4607	H 3000, 38	J 3816	K 2000, 2000	L 2000, 3837	P 3909	S 4606	82A 3853	83A 1644	84 4611, 4618	D 109, 205, 3758, 3907, 3930	E 200, 3800	G 3925, 4617	H 126, 1660, 3853, 3926, 3931
85G 218	P 3744	S 3000, 3A, 3000, 3	86D 3729, 3900, 4616	F 200, 205	G 200, 205	P 3733	88 212	90M 3704	91A 128, 3762, 3902	92 3702, 3703, 3841	93A 3902	94A 3806, 3853, 4603	D 3842	H 3807, 3827, 3833, 3909, 3924	L 206, 3732, 3850, 3924	P 107	96B 217	H 214, 222,	3721	K 200	N 214	S 145, 214	W 145, 1645	43B 1643	47C 214	53A 3824	H 4001	J 1517	K 200, 203	217, 1683	M 3707	6 3770	R 3905	T 3813	58C 217	59D 3204, 3753	3758, 4622	60 3900	64 1700					

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

1



2



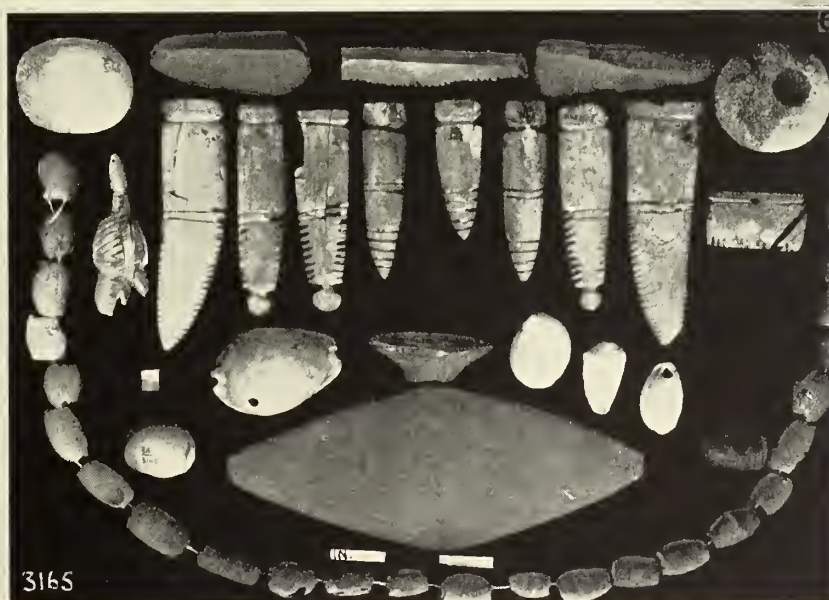
3



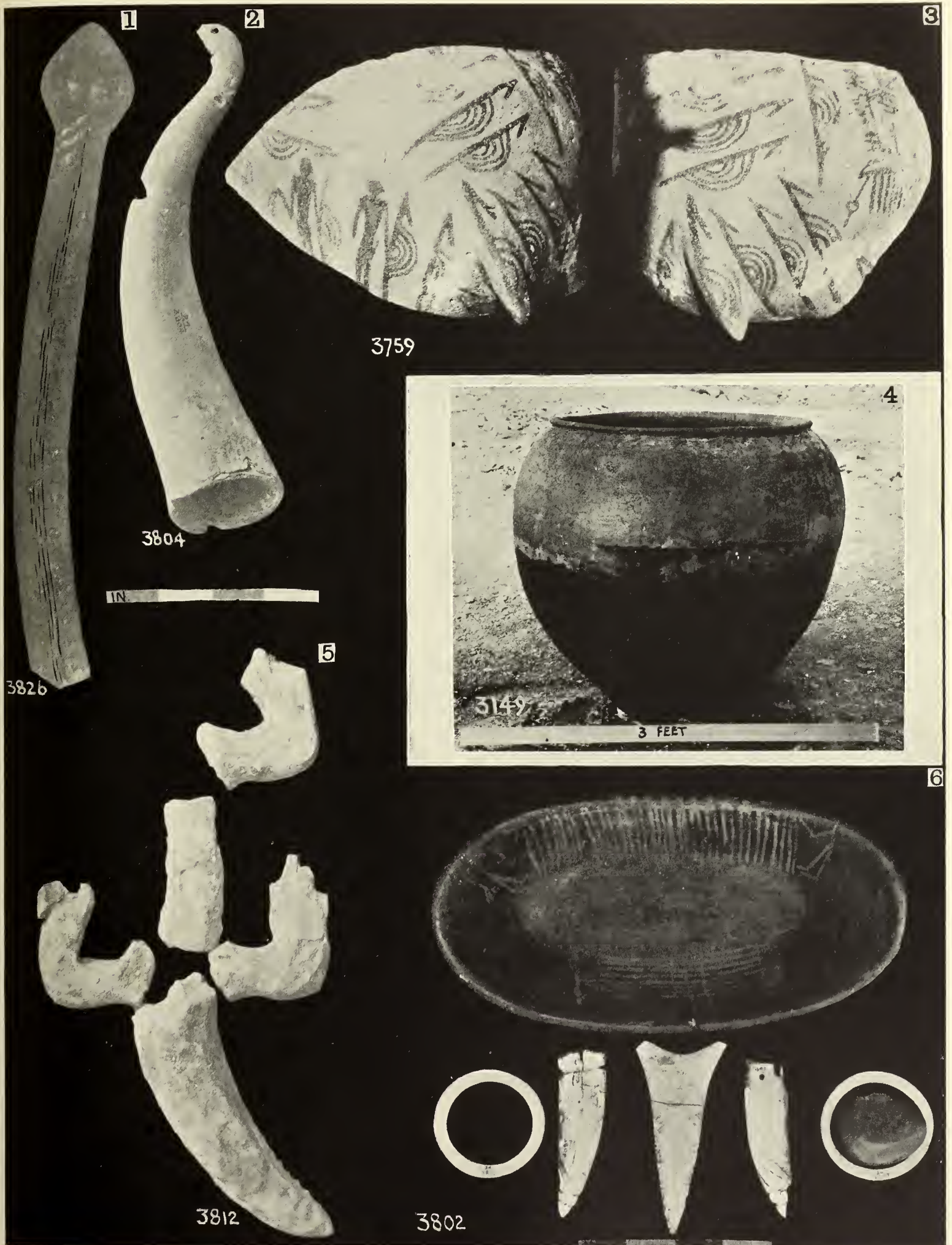
5



6

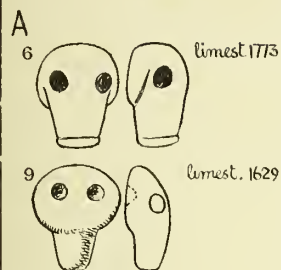


U. ILLINOIS
UNIVERSITY OF ILLINOIS

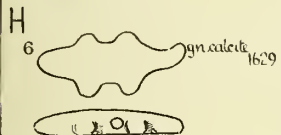


LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

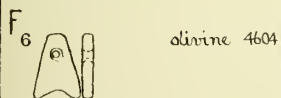
32 ANIMALS' HEADS.



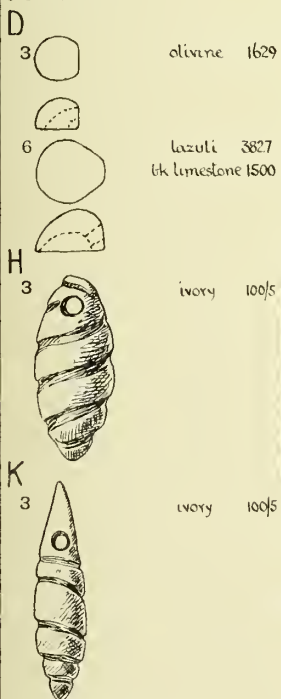
33 CROCODILES.



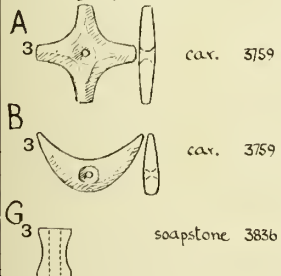
36 FLIES.



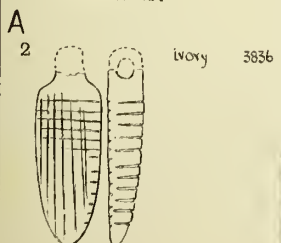
56 SHELLS.



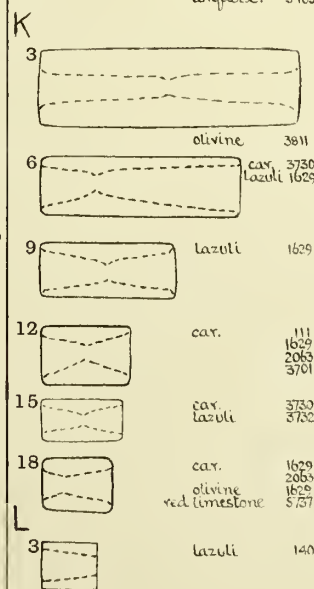
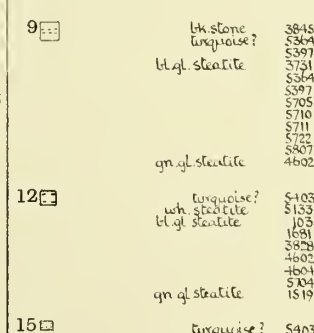
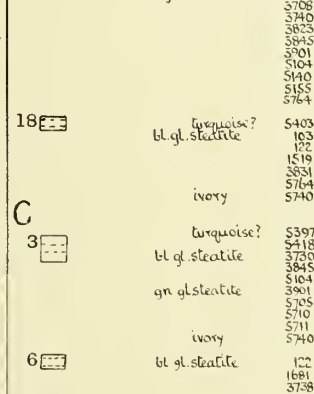
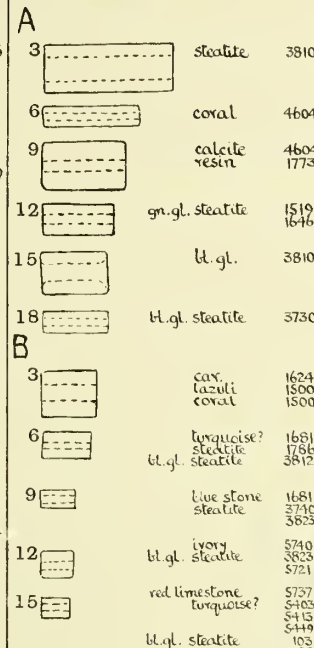
73 MISCELLANEOUS.



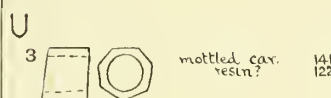
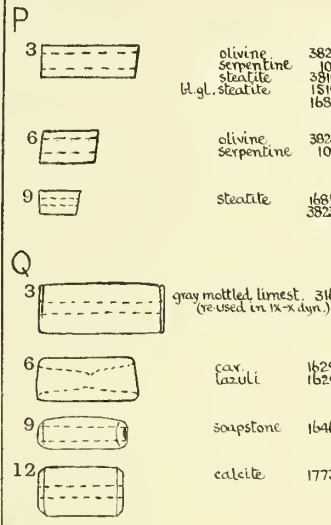
74 UNIDENTIFIED.



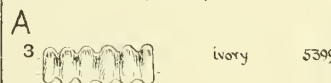
75 CYLINDERS.



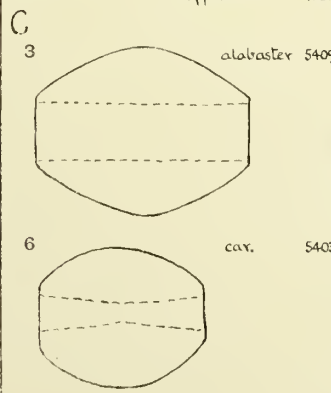
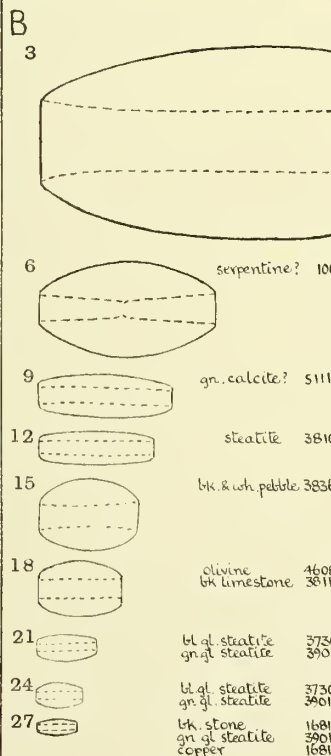
75 (CONT.)



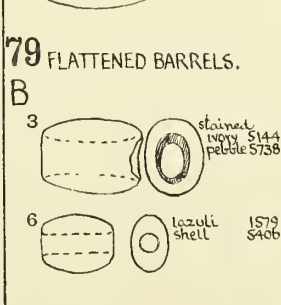
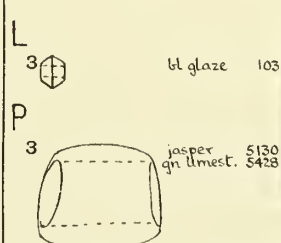
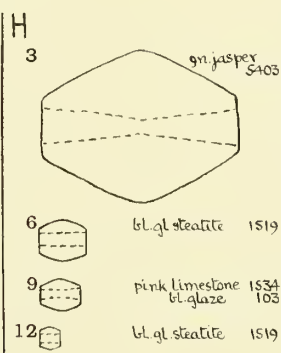
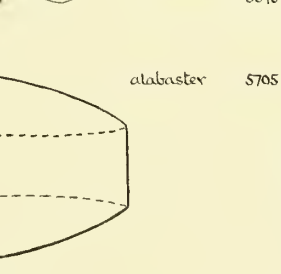
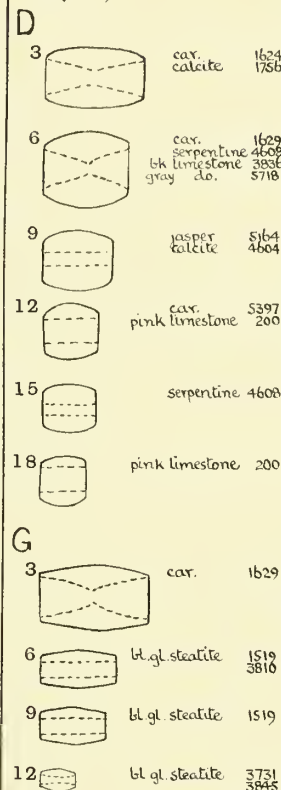
76 FANCY CYLINDERS.



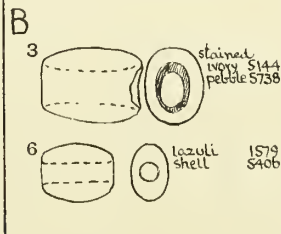
78 BARRELS.



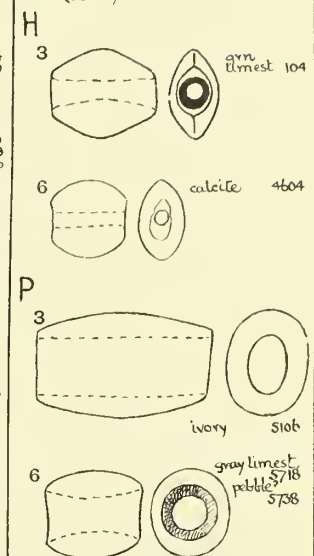
78 (CONT.)



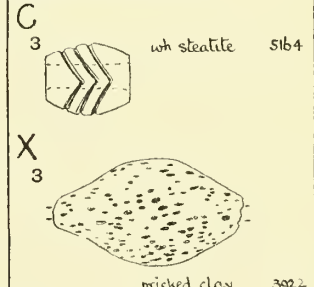
79 FLATTENED BARRELS.



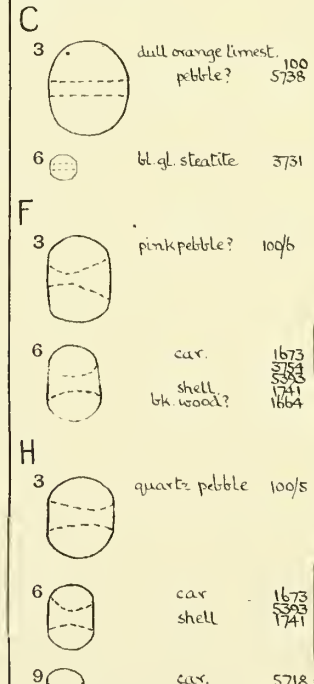
79 (CONT.)



80 FANCY BARRELS.



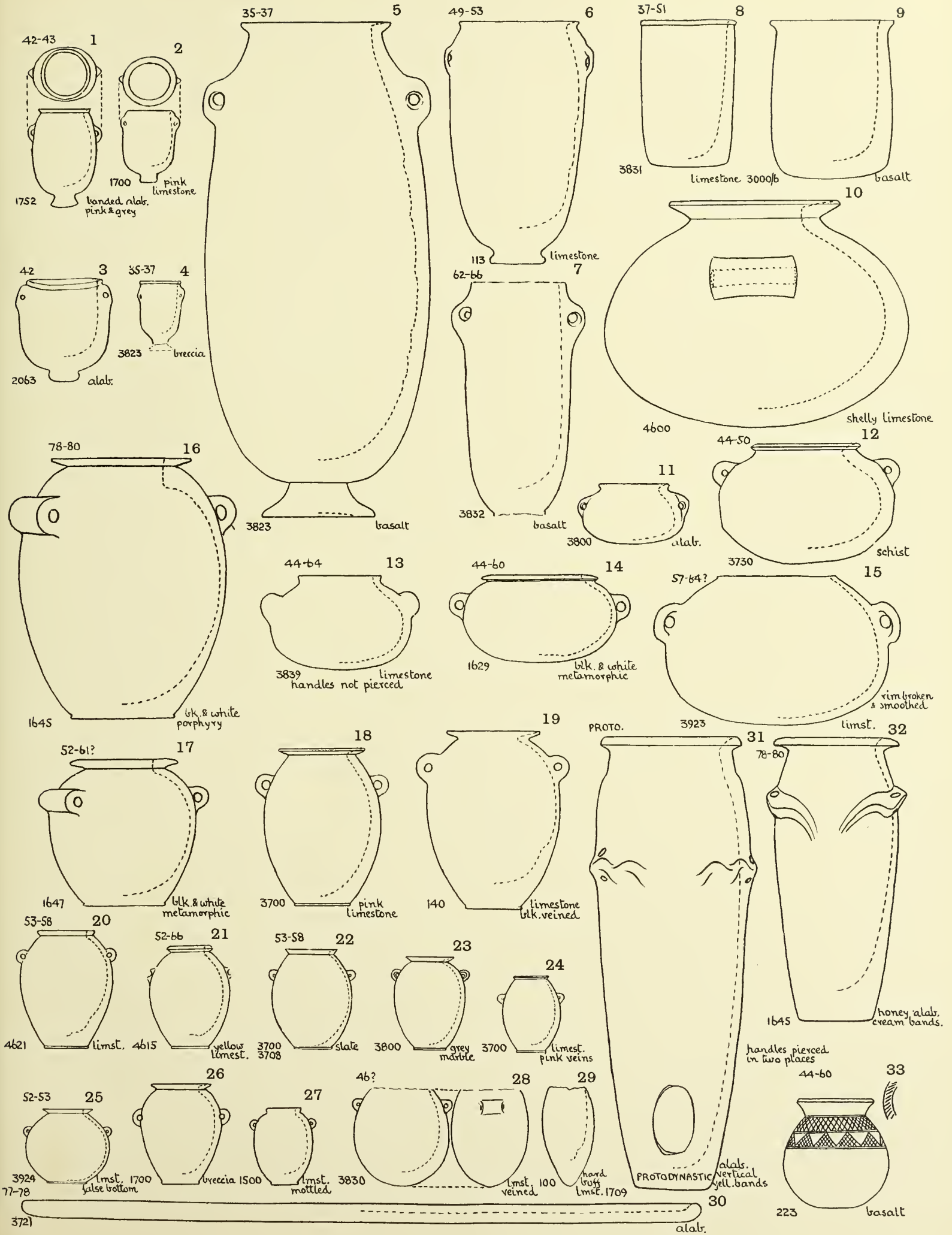
82 SPHEROIDS.



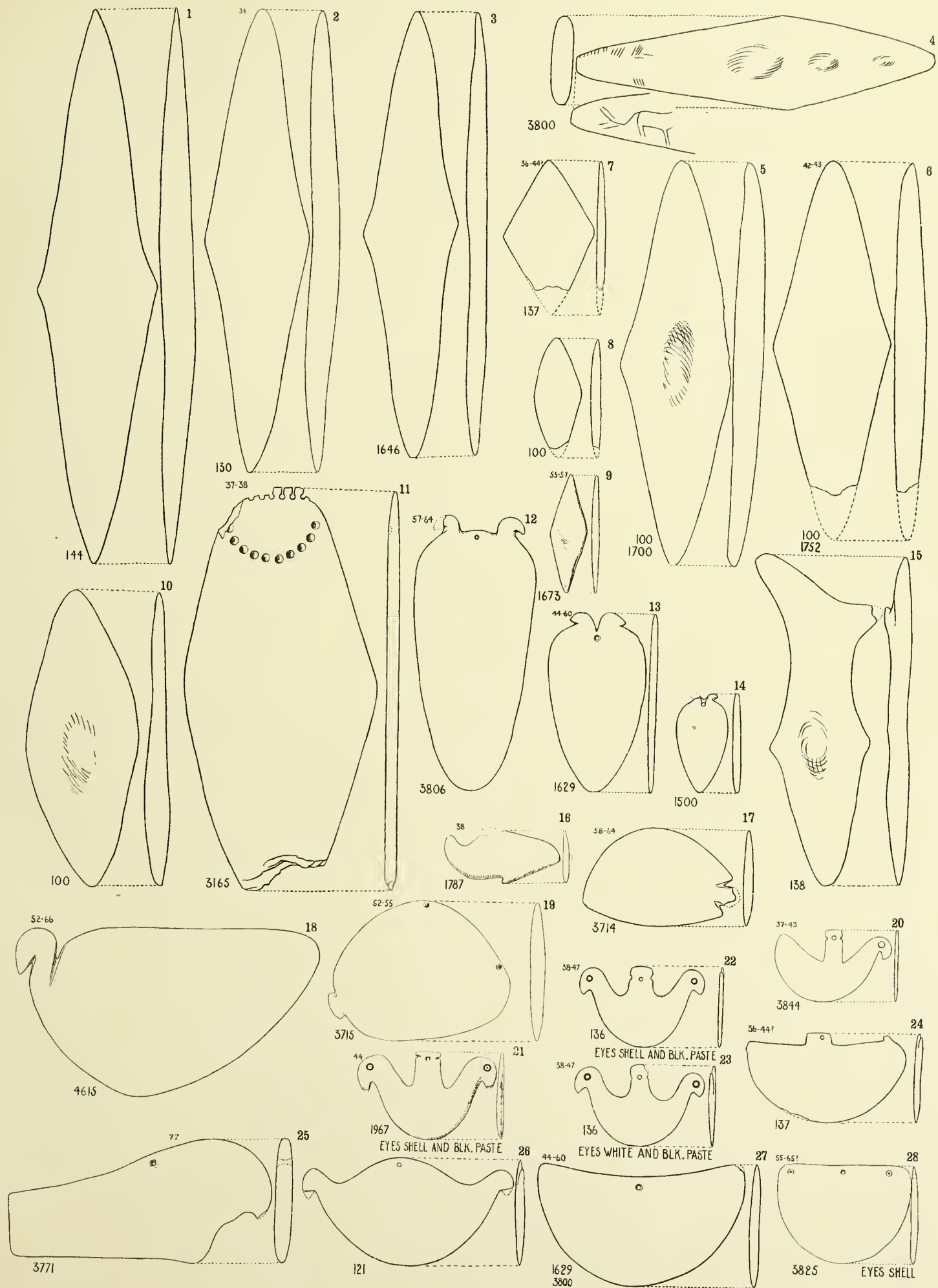
BADARIAN GRAVES ARE ALL NUMBERED OVER 5000

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

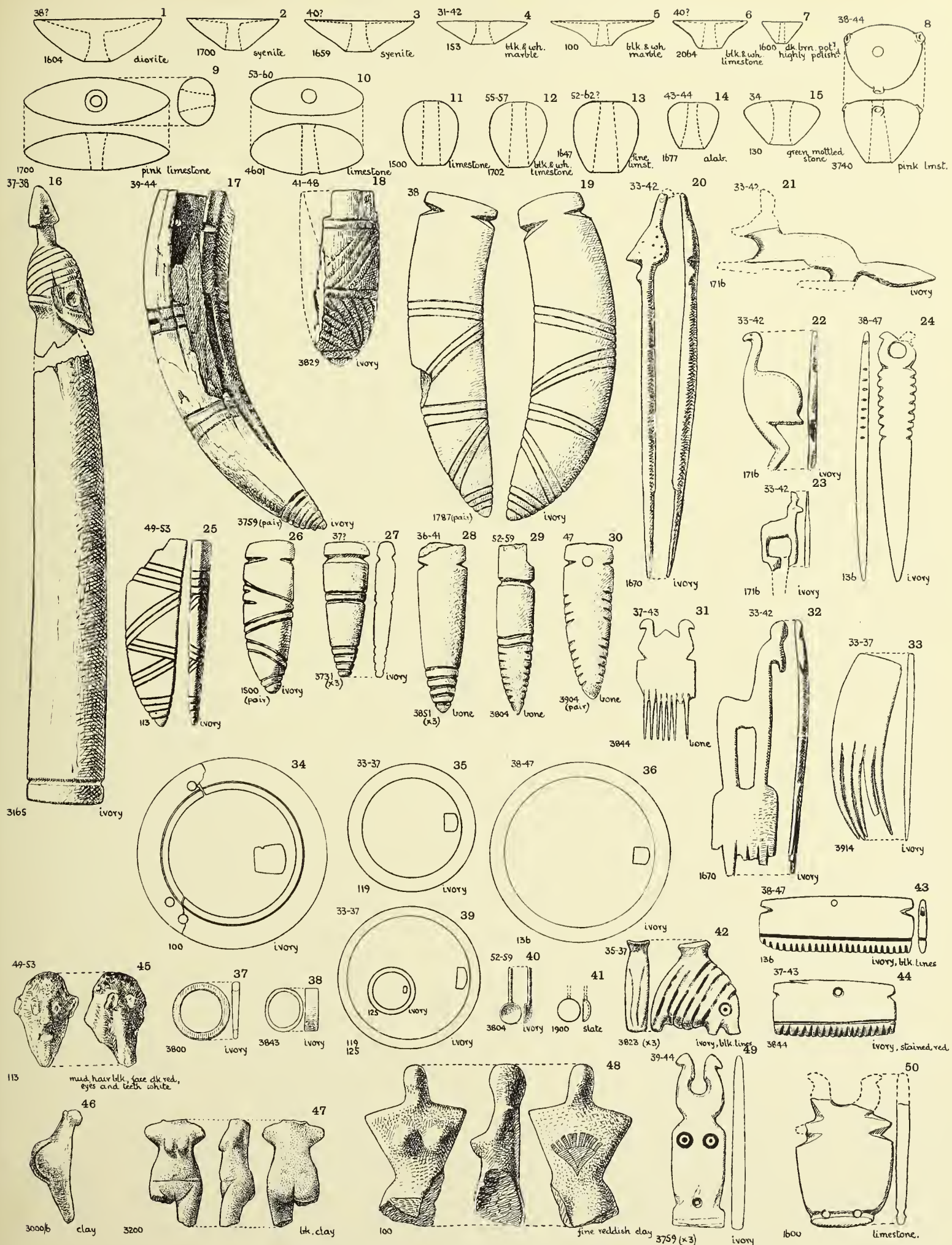
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



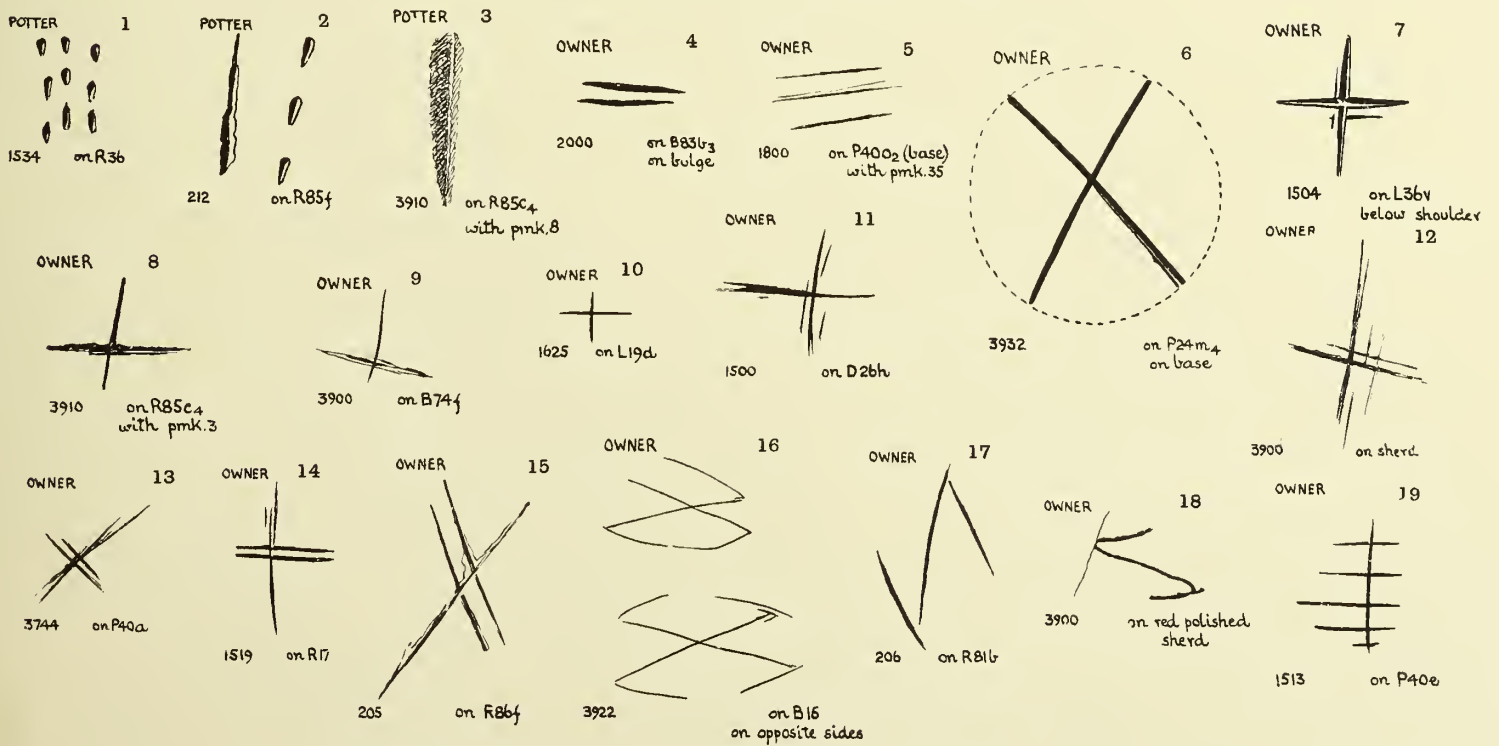
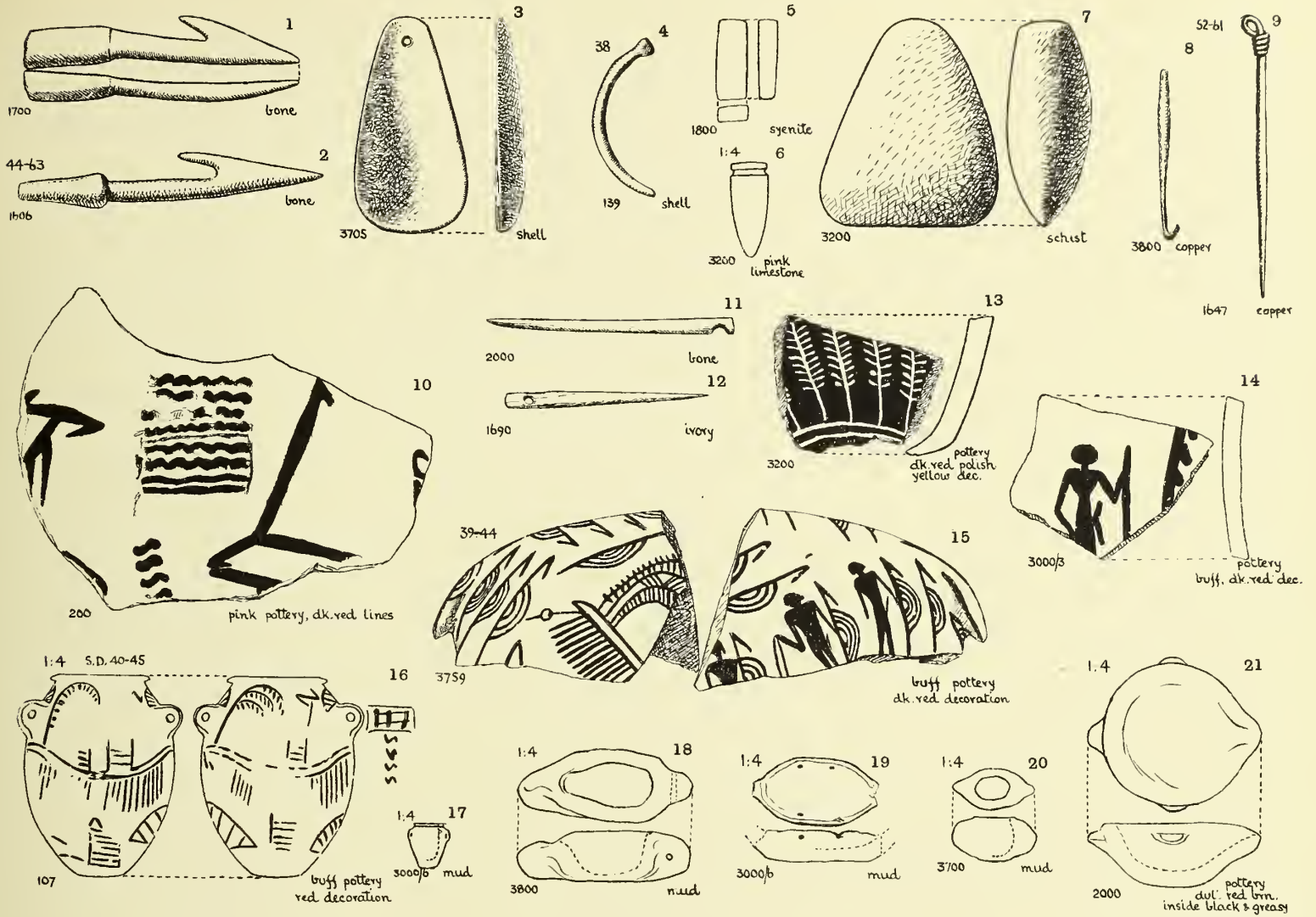
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



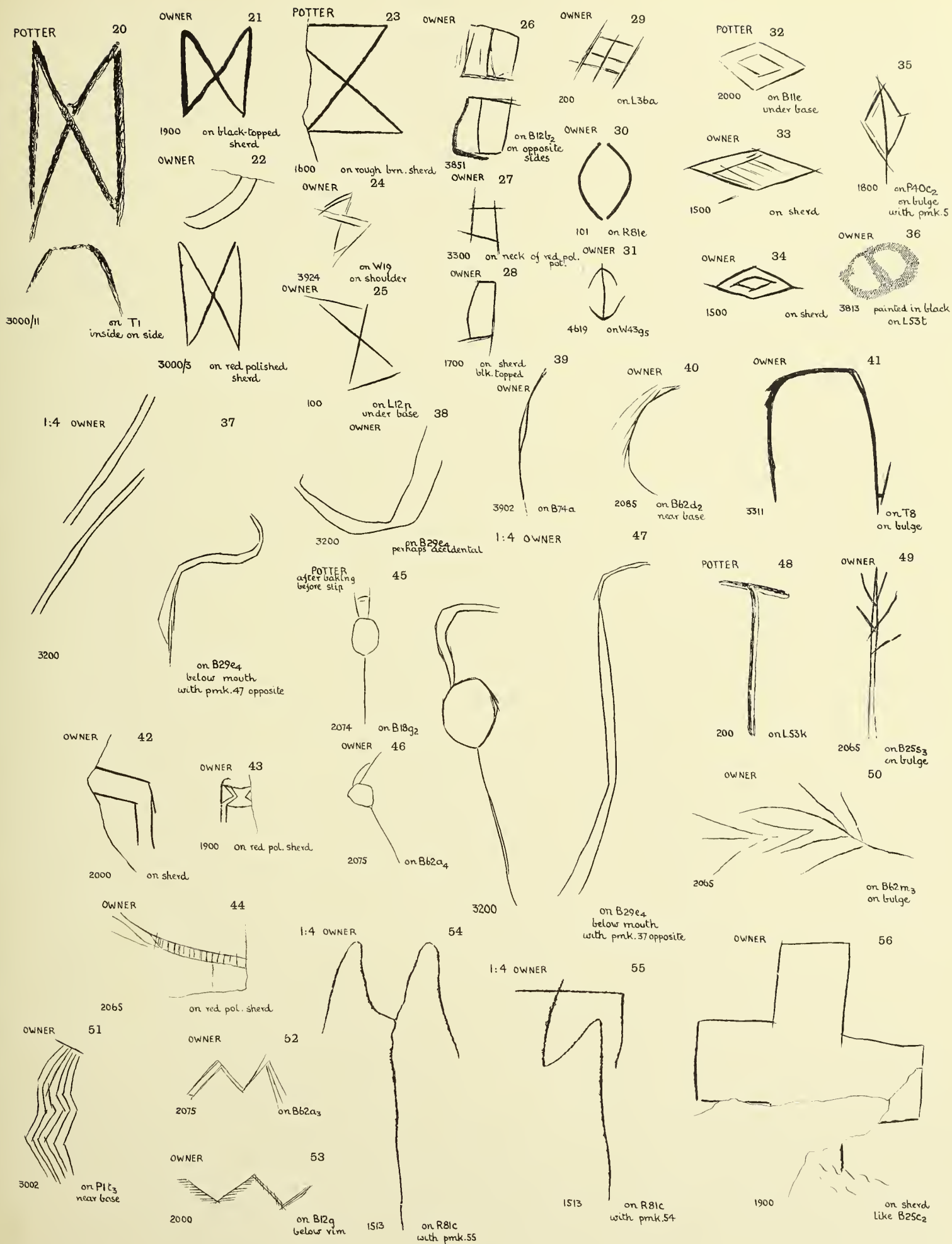
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



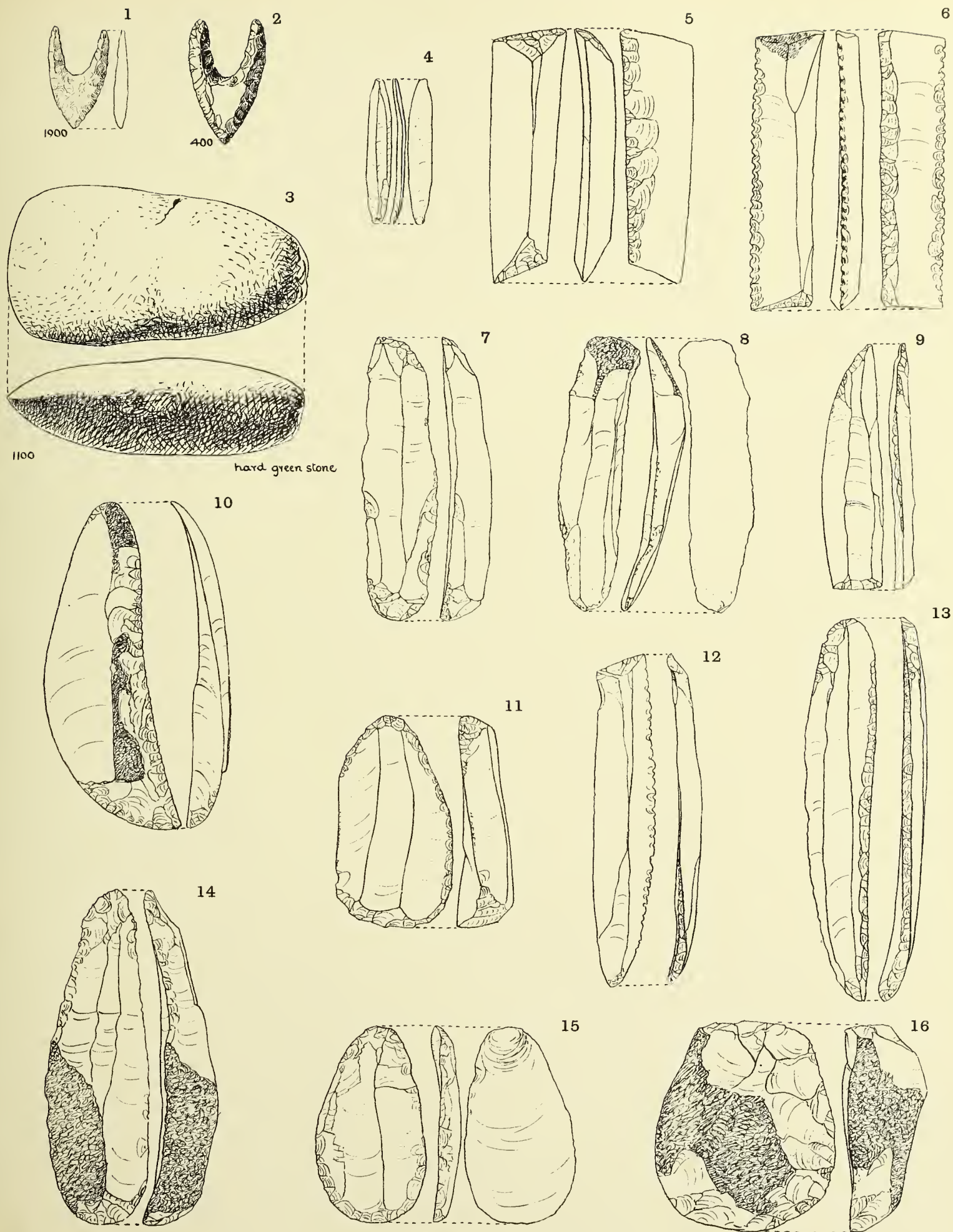
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



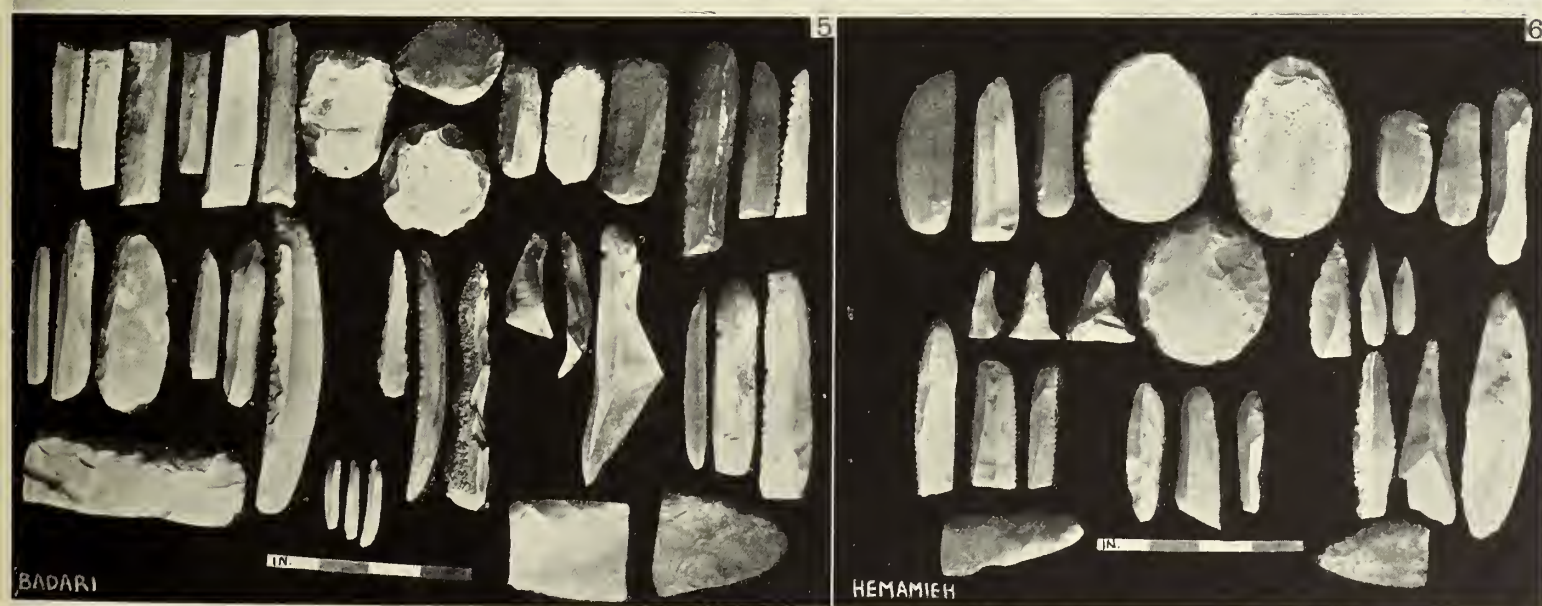
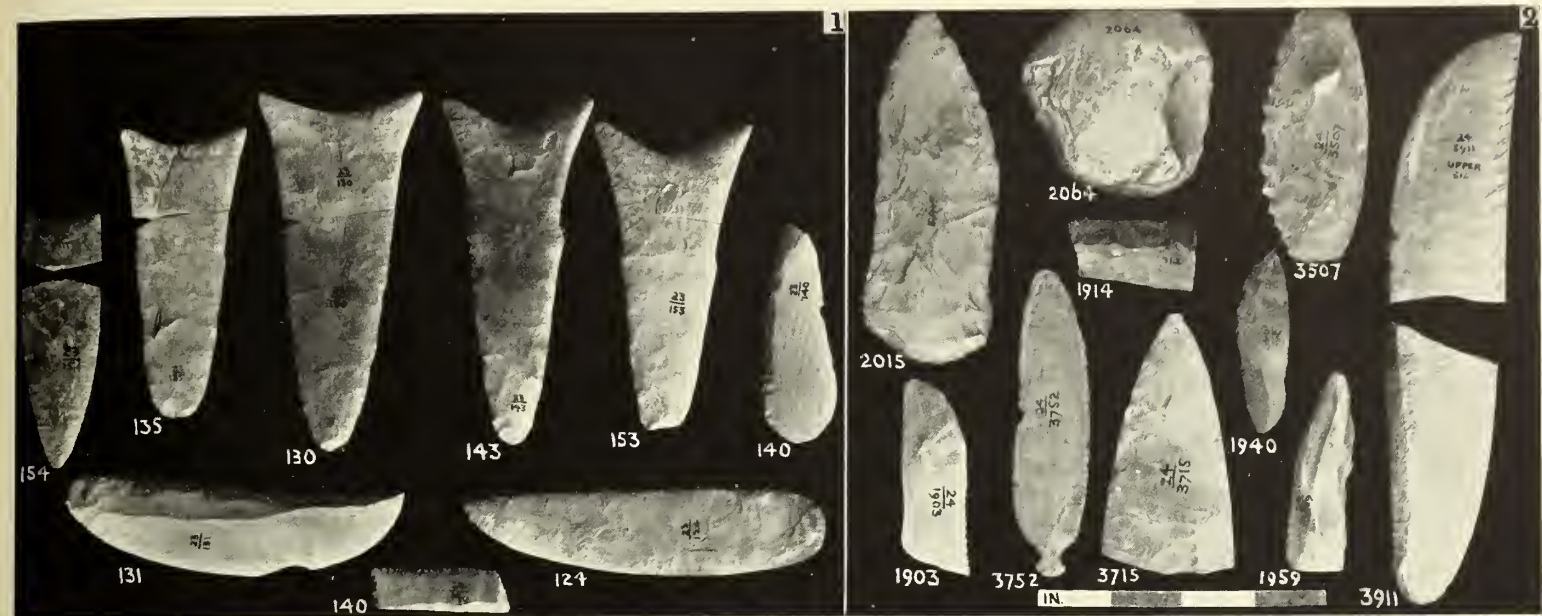
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



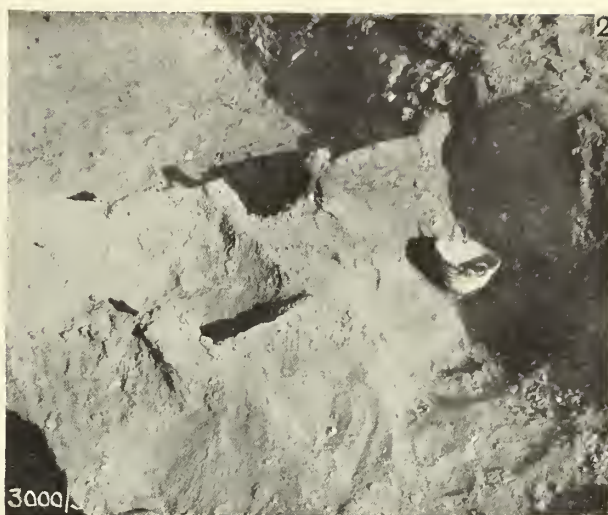
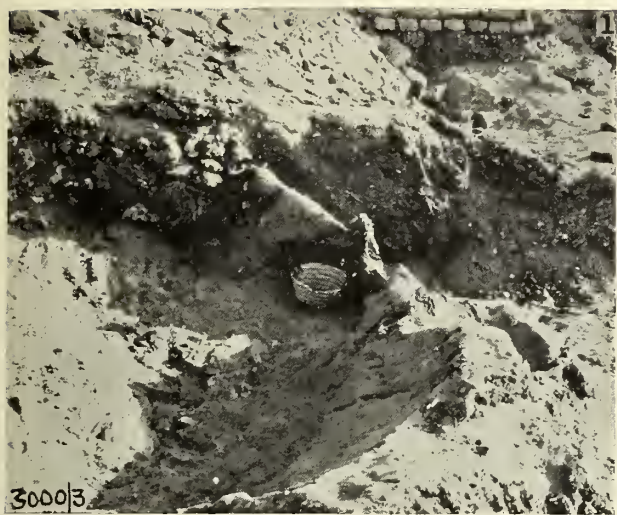
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

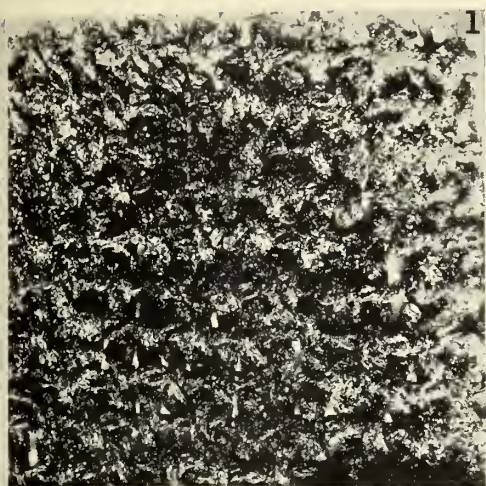


LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

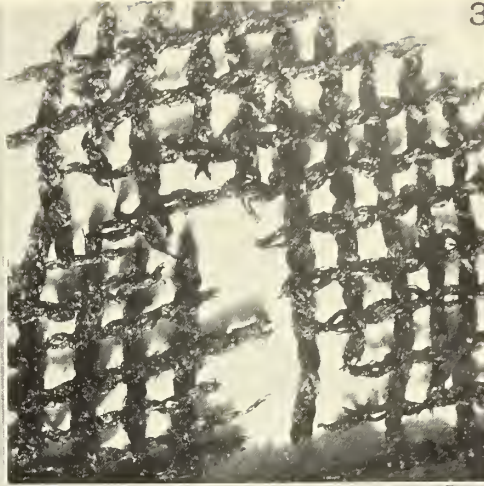
16:3



1



2

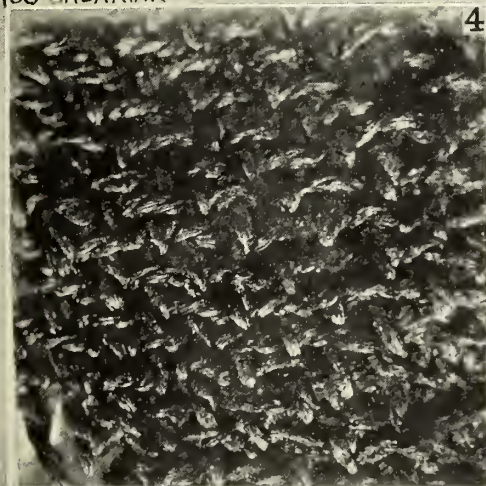


3

5100 BADARIAN

5100

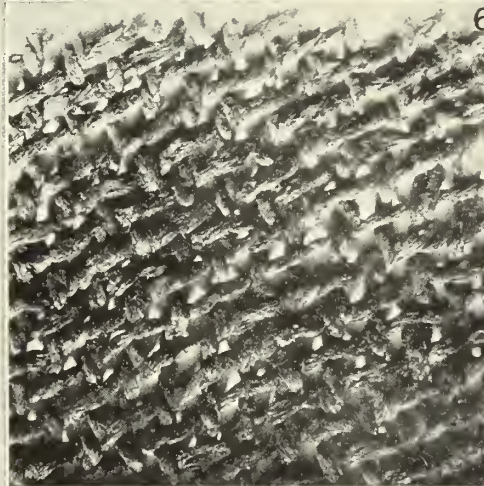
5100



4



5



6

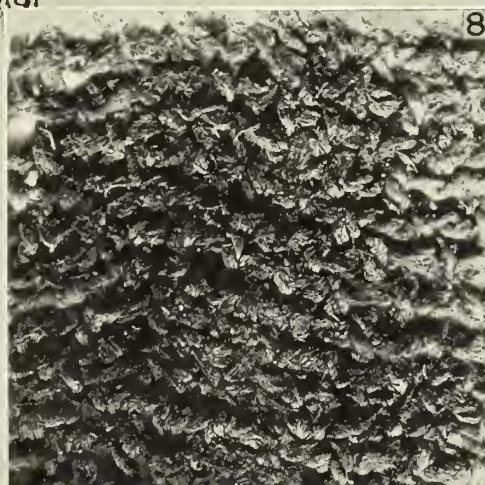
5100

5100

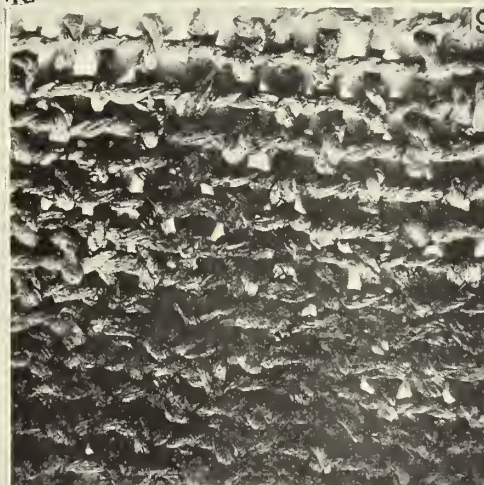
5100



7



8

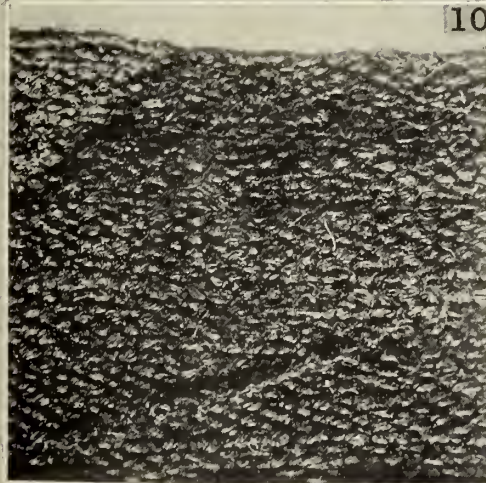


9

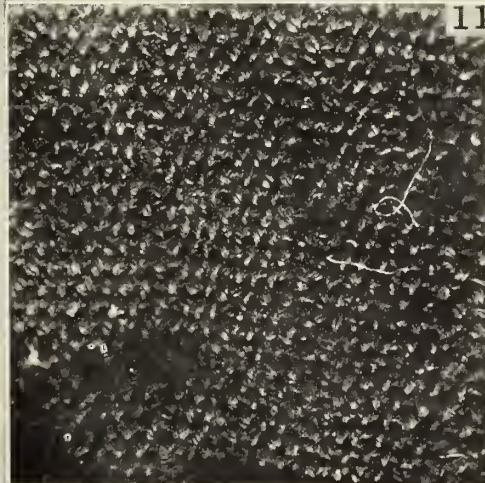
5110

5110

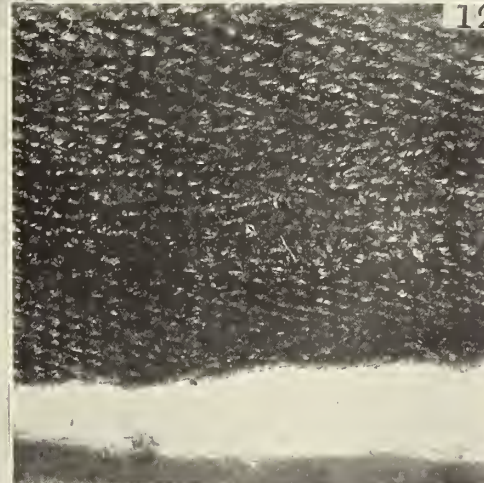
5110



10



11



12

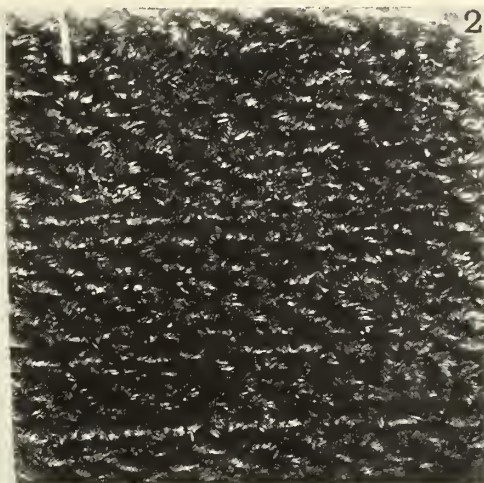
4620 PREDYNASTIC

4620

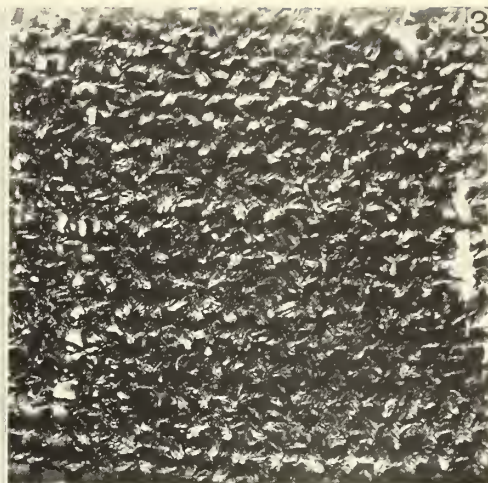
4620

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

1

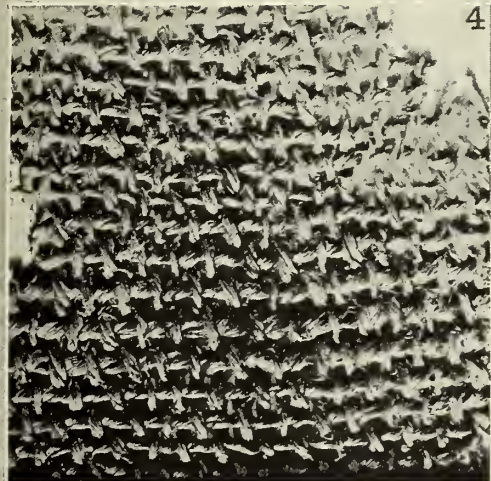


2

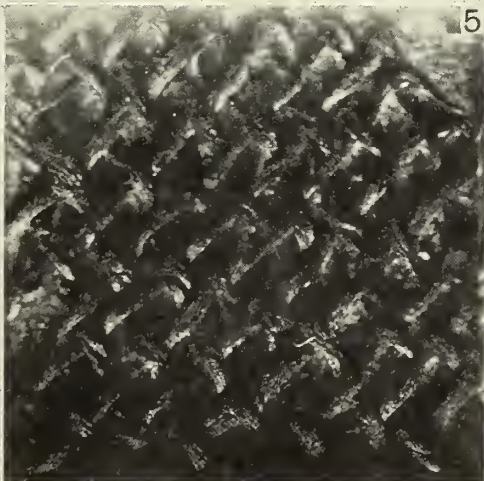


3

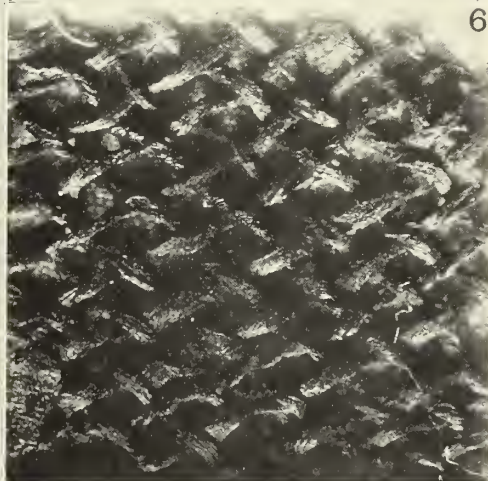
4620



4



5



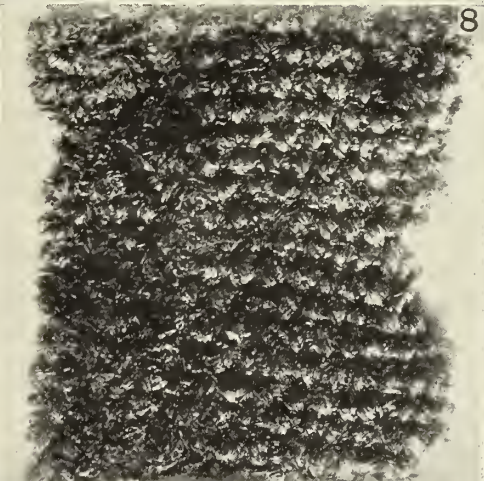
6

103

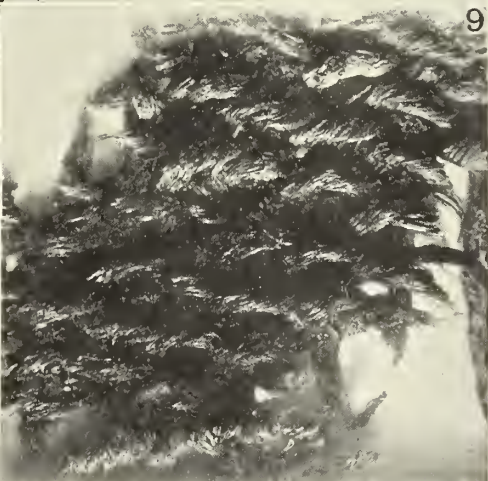
1964 PROTODYNASTIC



7



8



9

1964

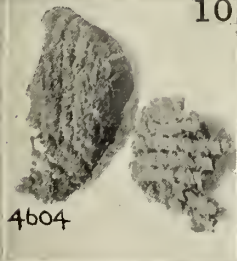
10

11

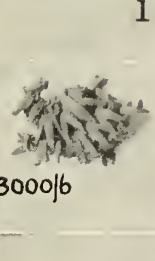
1989 PAN

12

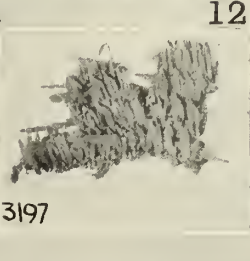
13



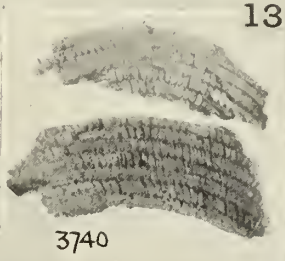
4604



3000/b



3197



3740

1989

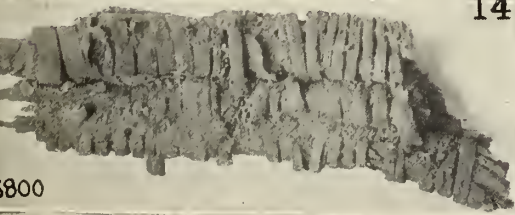
16



1989

14

15



3800

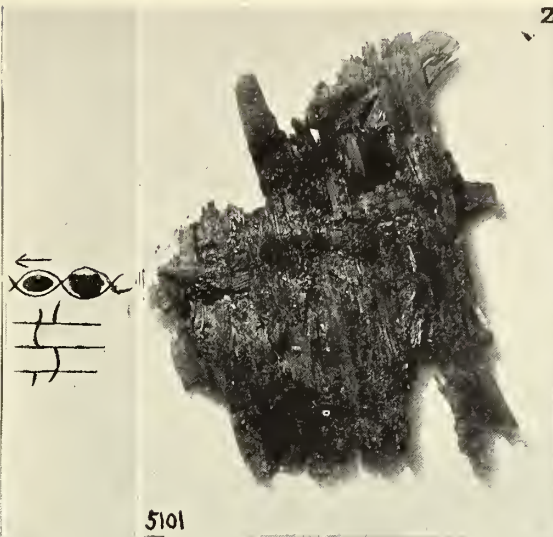


3823

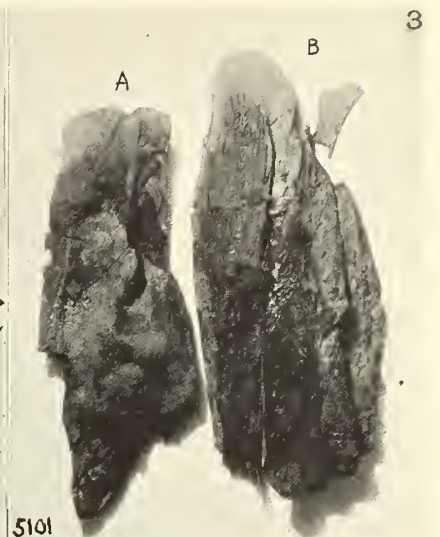
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



1



2



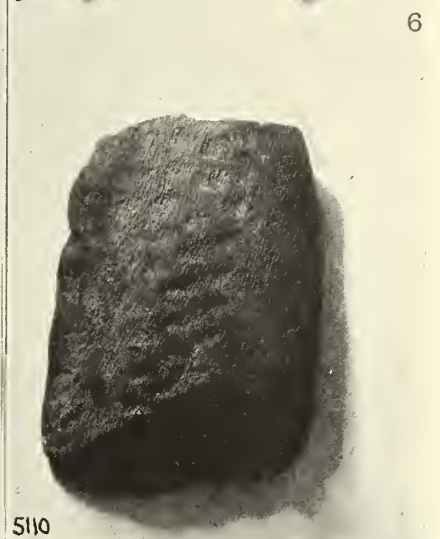
3



4



5



6



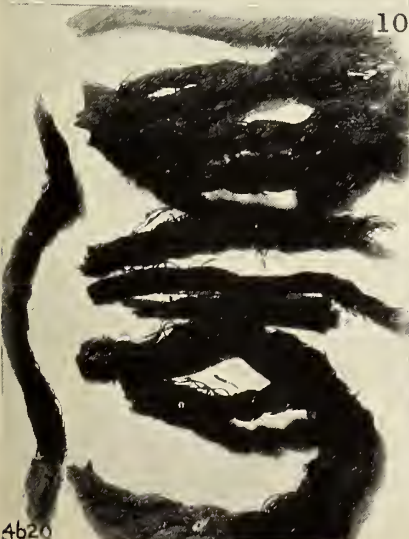
7



8



9



10

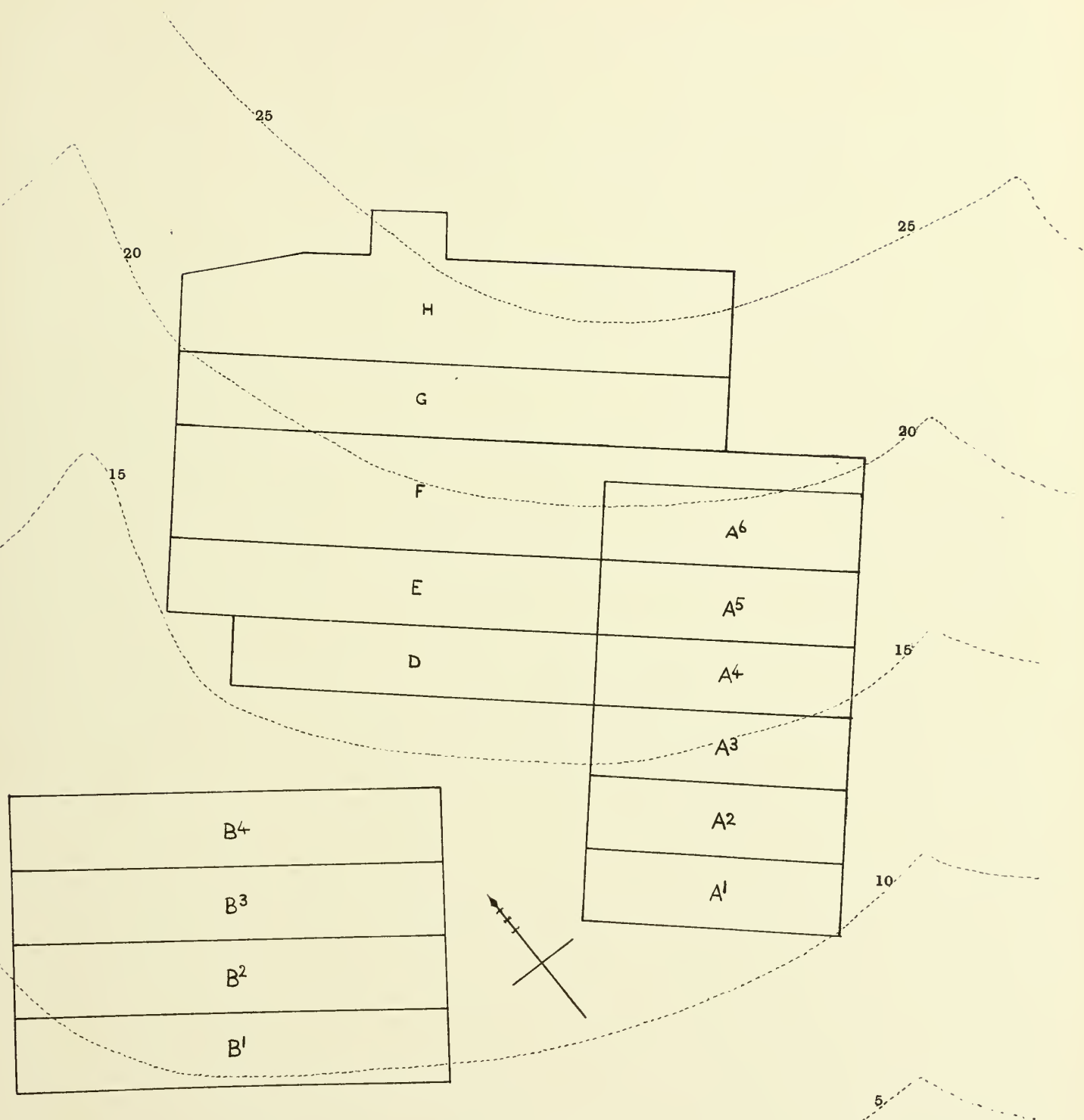


11



12

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



10 5 0 10 20 30 40 50
SCALE IN FEET

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



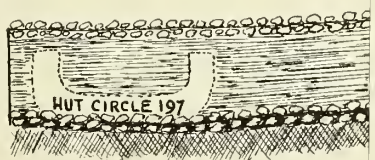
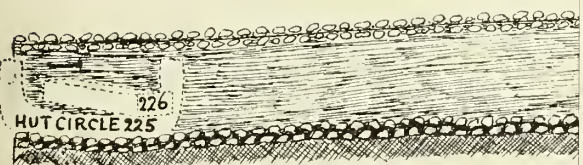
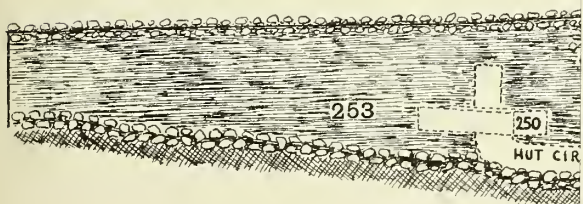
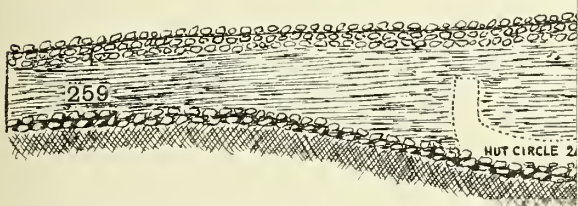
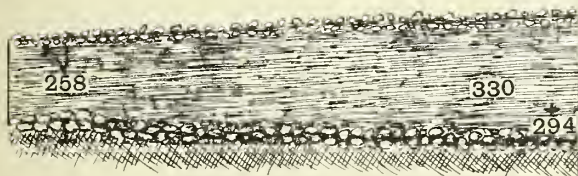
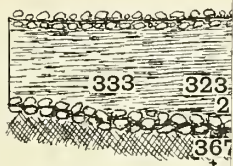
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

1:100

HEMAMIEH: AREA

SHEWING PO

0 5 10 15 20 25



0 FT 5 10 15 20 25

OBJECTS ARE NOT NEARLY

V = DECORATED

⊗ = WHITE CRO

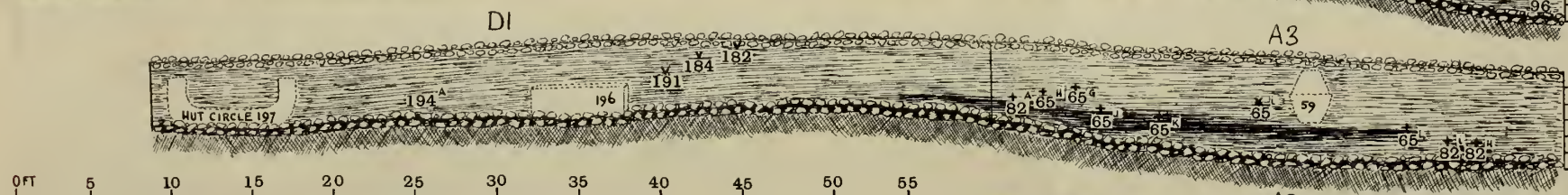
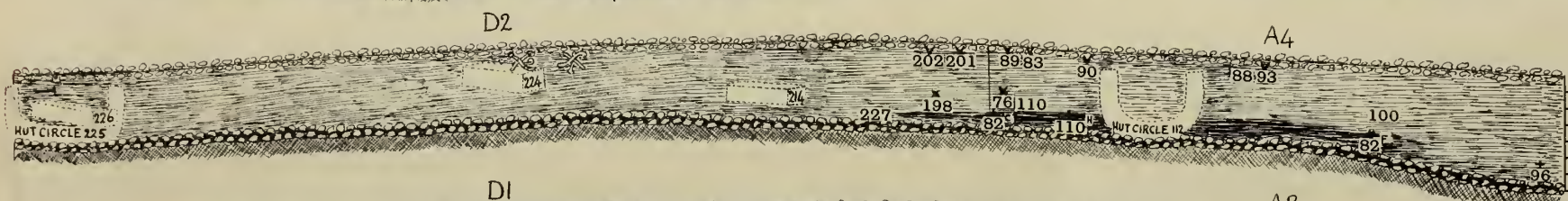
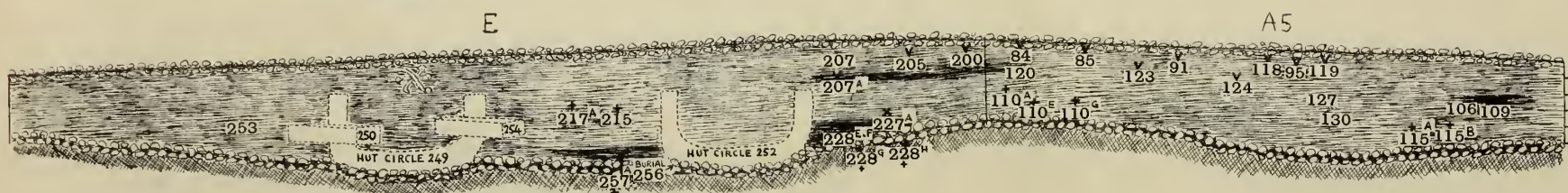
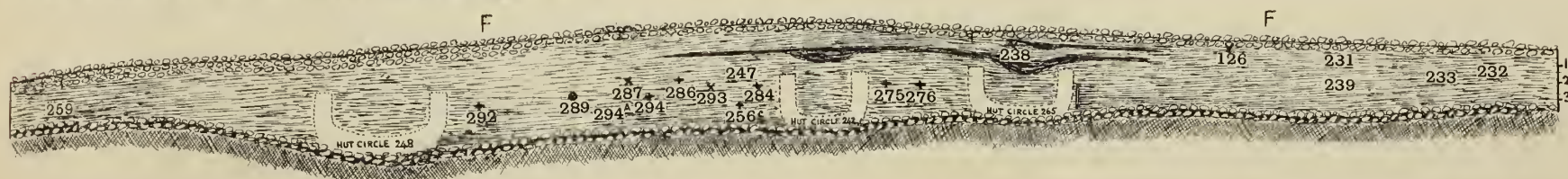
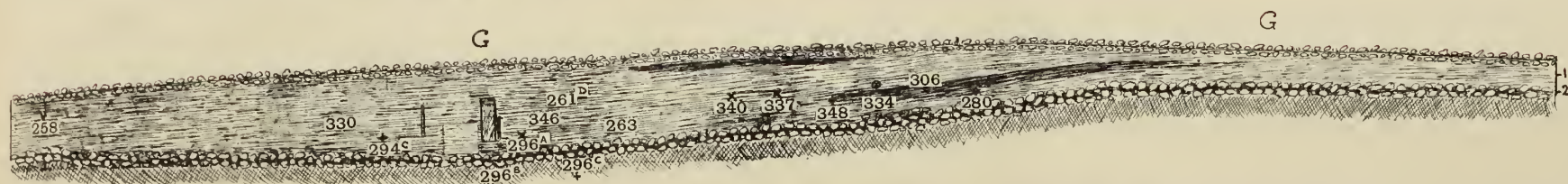
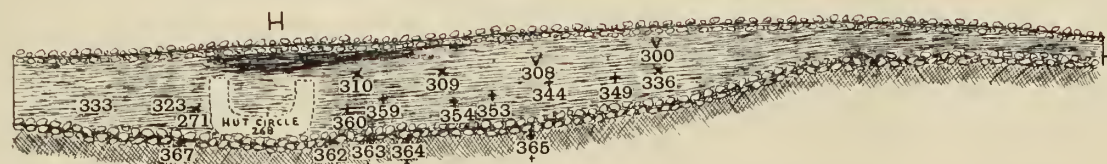
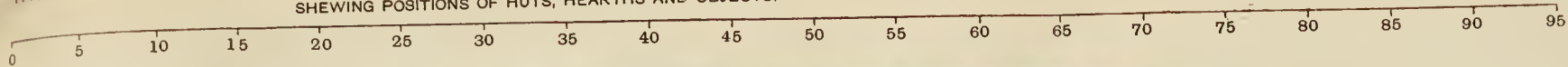
X = BLACK TOP

+ = BADARIAN S

HEMAMIEH: AREA SECTIONS OF PREHISTORIC SETTLEMENTS.
 SHEWING POSITIONS OF HUTS, HEARTHES AND OBJECTS.

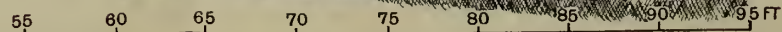
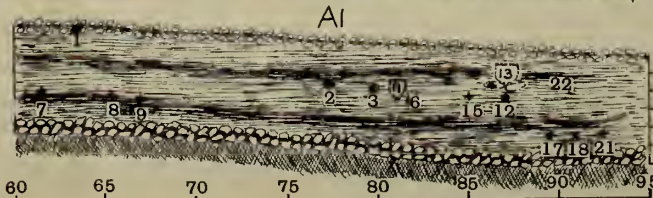
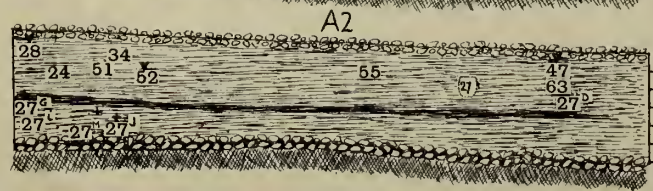
LXIV

1:100



OBJECTS ARE NOT NECESSARILY UPON THE LINE OF SECTION,
 BUT NEARLY ALL ARE WITHIN 5 FEET OF IT.

- V = DECORATED OR MIDDLE PREDYNASTIC SHERDS
- ⊗ = WHITE CROSS-LINED SHERDS
- X = BLACK TOPPED SHERDS
- + = BADARIAN SHERDS OR FLINTS



VIEWS OF SITE, AND TYPICAL STRATIFICATION OF DEPOSITS



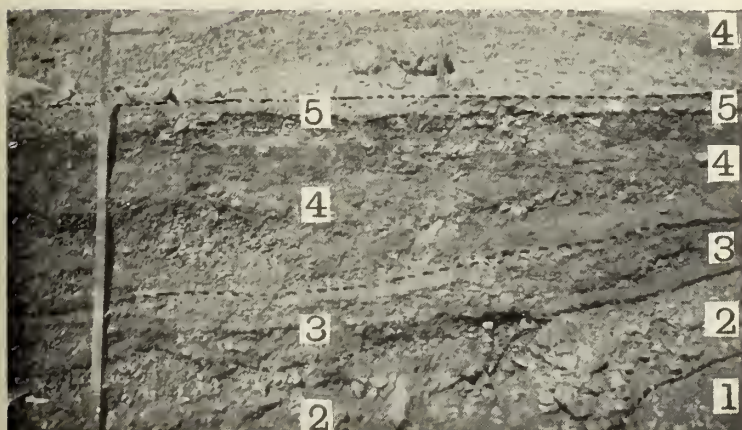
CANAL, CULTIVATION, AND CLIFFS



SITE OF PREDYNASTIC SETTLEMENT



GENERAL VIEW OF CLIFFS AND TALUS SLOPES WITH PREDYNASTIC SETTLEMENT ON EXTREME RIGHT



SECTION IN AREA G. (1) SUB-BRECCIA. (2) BRECCIA. (3) EARLY PREDYNASTIC HEARTH. (4) MIDDLE PREDYNASTIC DEPOSITS. (5) SURFACE WASH



CLEARING THE BRECCIA DEPOSIT AREA D. HOLE IN SECTION FACE CAUSED BY GRAVE NO. 214

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

PREDYNASTIC HUT CIRCLES



HUT CIRCLES Nos. 248 and 249 OVERLOOKING CULTIVATION



HUT CIRCLES Nos. 248 AND 249 IN RELATION TO OVERLYING DEPOSITS. (0) 10" SURFACE WASH. (1) 2' 10" MIDDLE PREDYNASTIC DEPOSIT



HUT CIRCLES IN AREA F, SHOWING RELATION TO DEPOSITS IN VERTICAL SECTION. NOTE APERTURES IN WALLS OF CIRCLE 249 CAUSED BY OLD KINGDOM BURIALS: ALSO BONE STACK No. 223 RESTING ON CIRCLE WALL



HUT CIRCLE No. 112



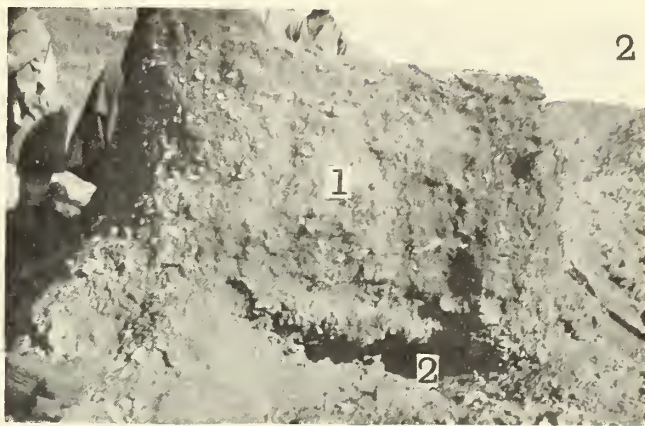
(1) SMALL STORE PIT No. 236

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

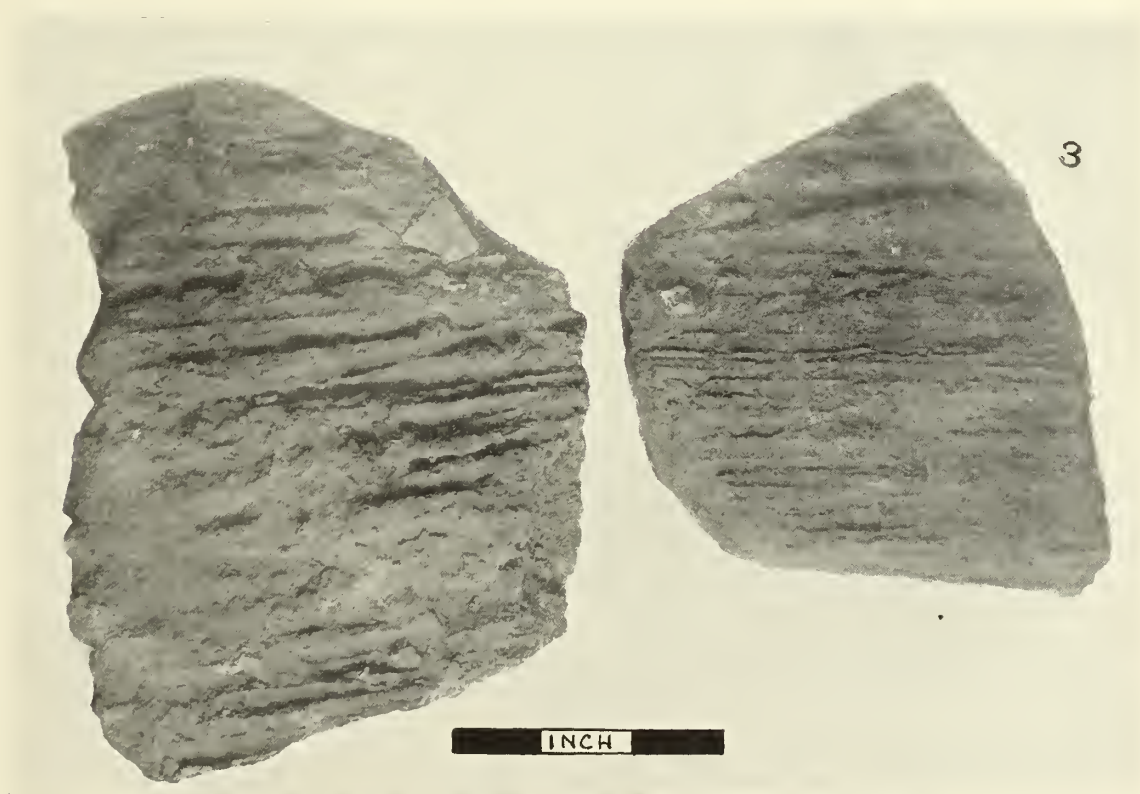
PREDYNASTIC HUT CIRCLES



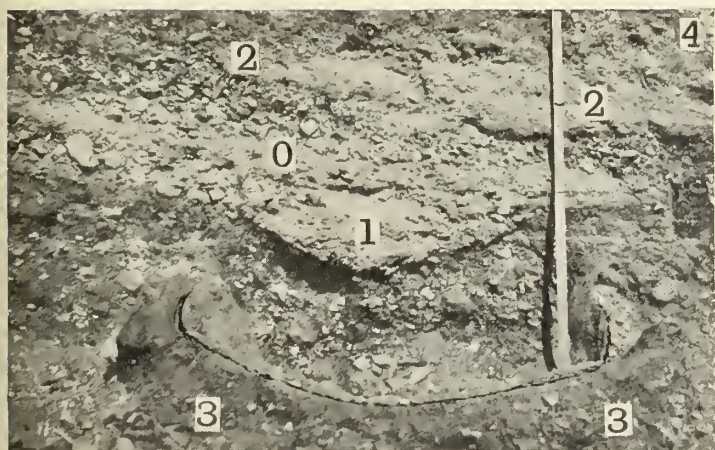
HUT CIRCLES



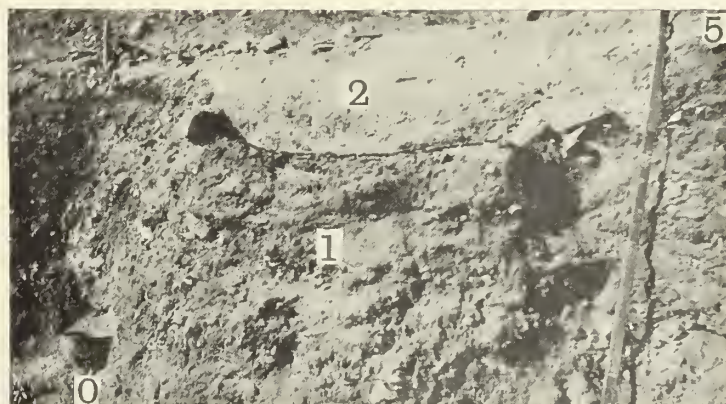
(1) WALLS OF HUT CIRCLE 252
(2) POSITION OF BADARIAN BURIAL No. 256



REED-IMPRESSED MUD FROM HUT CIRCLE EXTERIOR



SECTION OF HUT CIRCLE 265. (3) WALL OF HUT.
(1) OVERLYING HEARTH. (2) UPPER HEARTH.
(0) DECORATED SHERD No. 23



HUT CIRCLE 268. (1) OUTER FACE OF HUT. (2) OVERLYING HEARTH. (0) BLACK-TOPPED POT 271

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

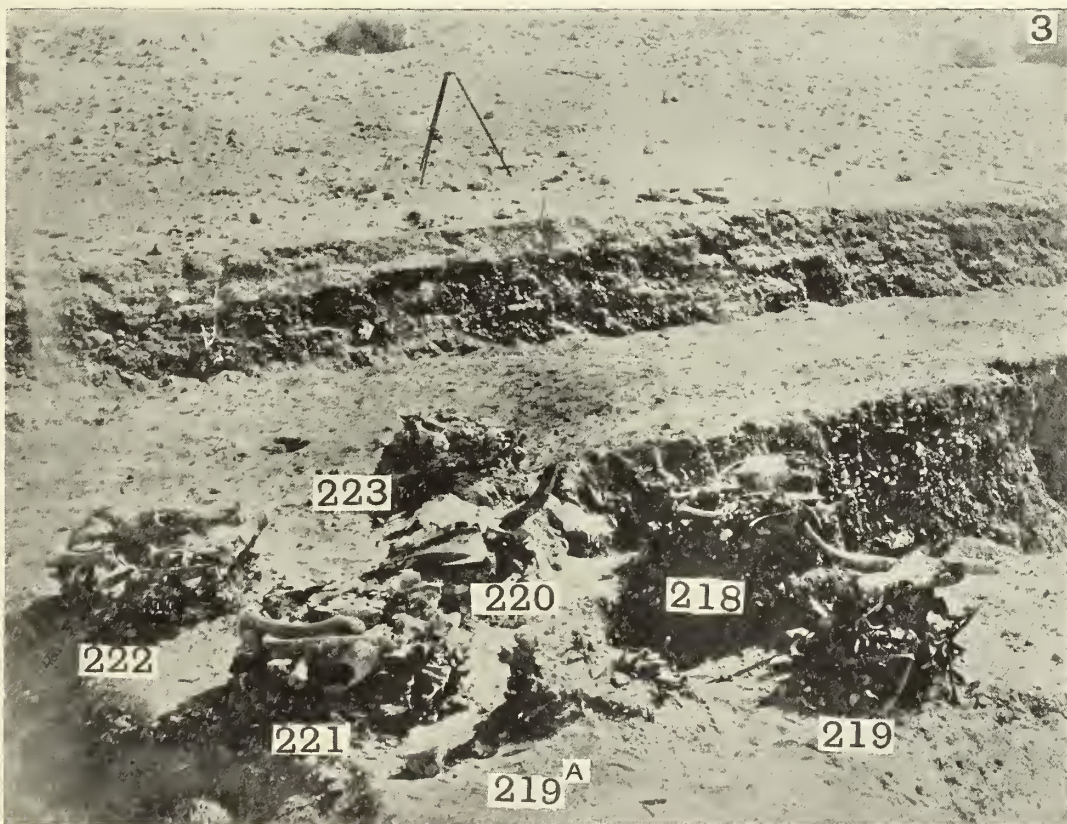
OX BONE PILES



OX PILE PARTIALLY EXCAVATED IN RELATION TO SURFACE LEVEL



OX PILE No. 218



OX BONE STACKS, No. 223 SITUATED OVER HUT CIRCLE No. 249. NOTE WHITE SURFACE SCREE ON TOP SECTION, OVERLYING DARK DEPOSITS



OX PILE WITH CAPPING HEAD



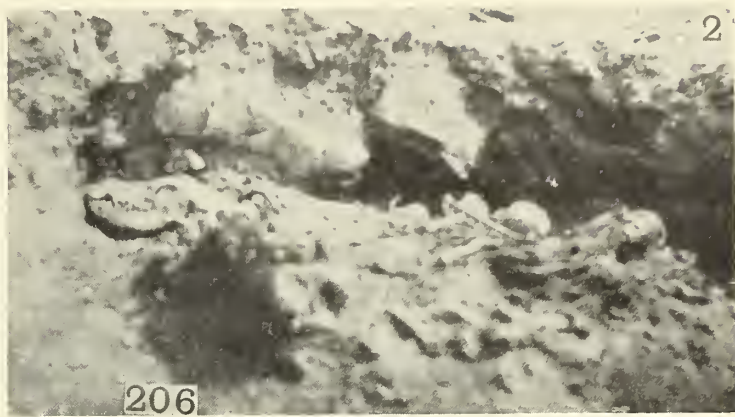
OX PILE WITH CAPPING HEAD

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

ANIMAL BURIALS AND HUMAN POT BURIAL



OX PILE No. 222



DOG BURIAL WITH OVERLYING BOULDERS



POTS USED IN BURIAL 59



POT BURIAL 59, BEFORE REMOVAL OF LID



POT BURIAL 59. LID REMOVED SHOWING BODY

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

OBJECTS FROM 0—1 FT. LEVEL

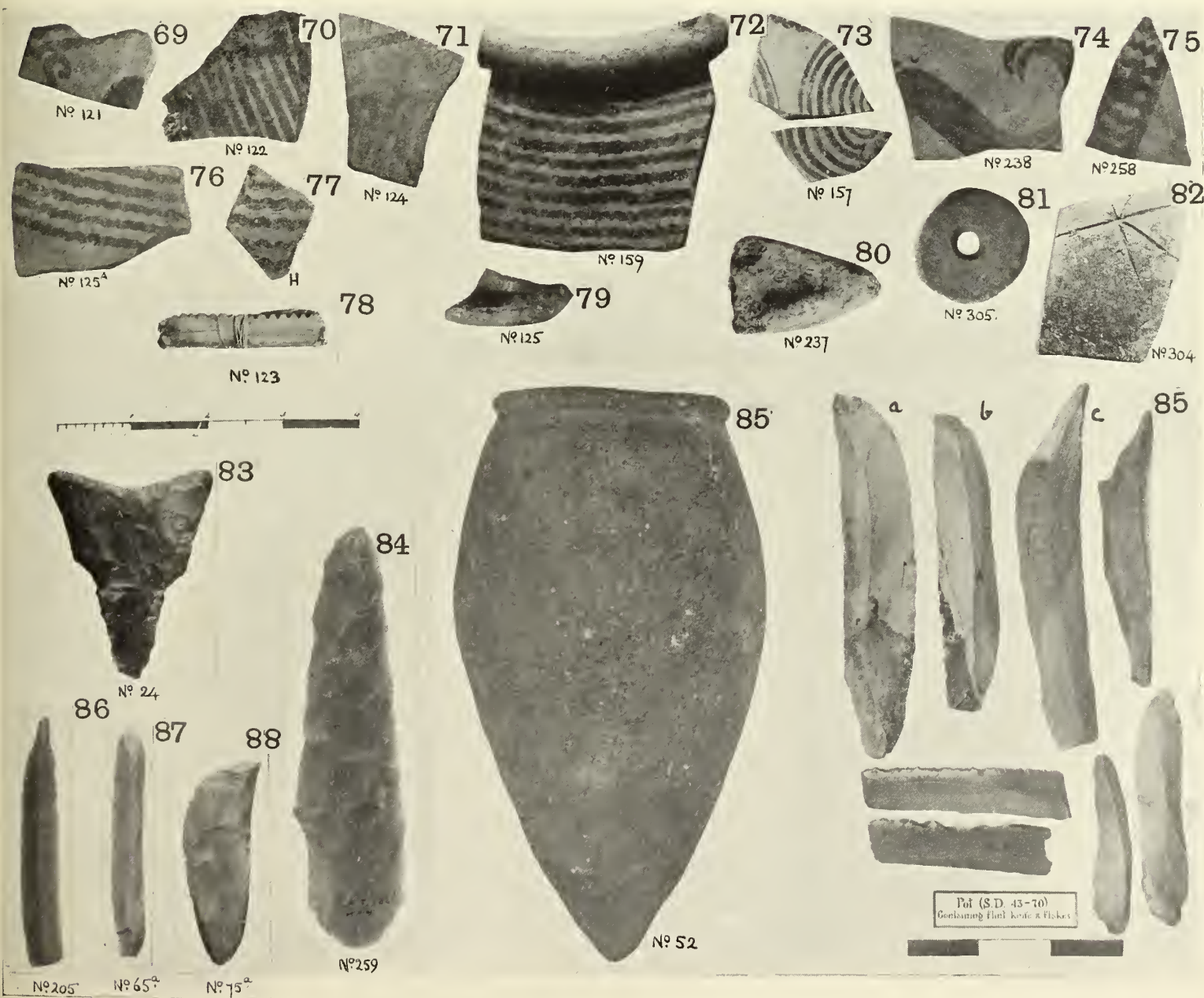


LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

OBJECTS FROM 1 FT. TO 1 FT. 6 IN.

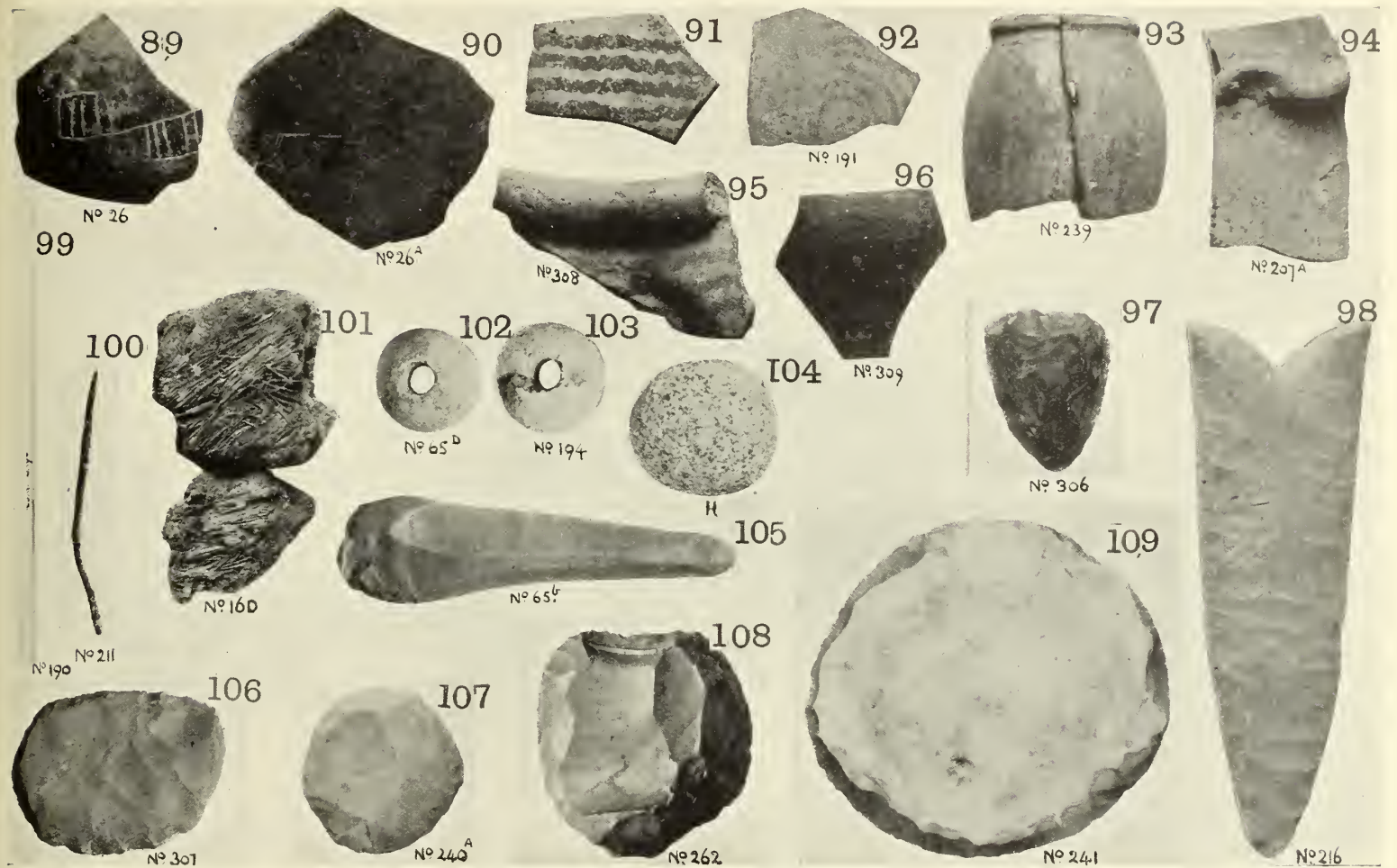


OBJECTS FROM 1 FT. 6 IN. TO 2 FT.



LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

OBJECTS FROM 2 FT. TO 2 FT. 6 IN.

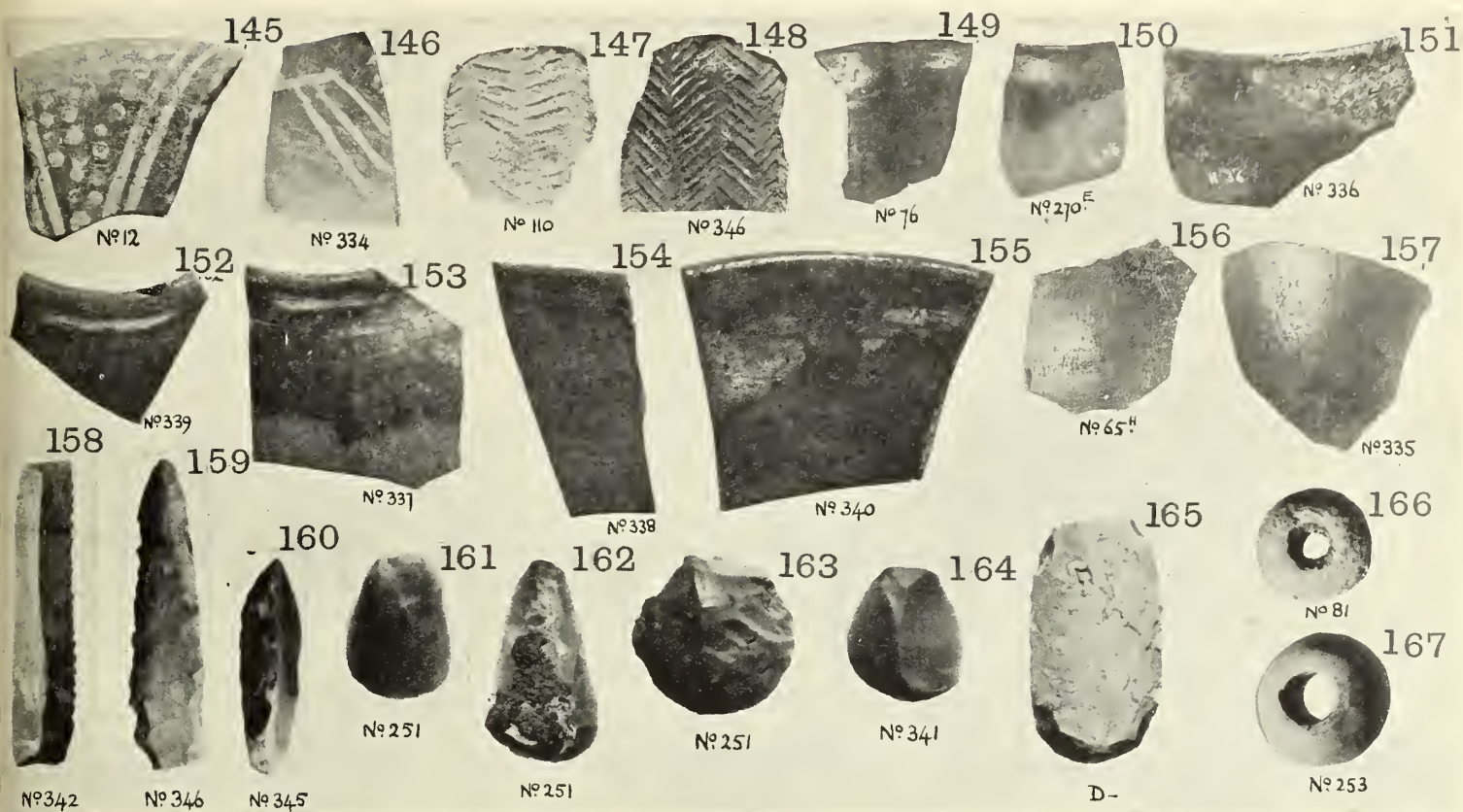


OBJECTS FROM 2 FT. 6 IN. TO 3 FT.

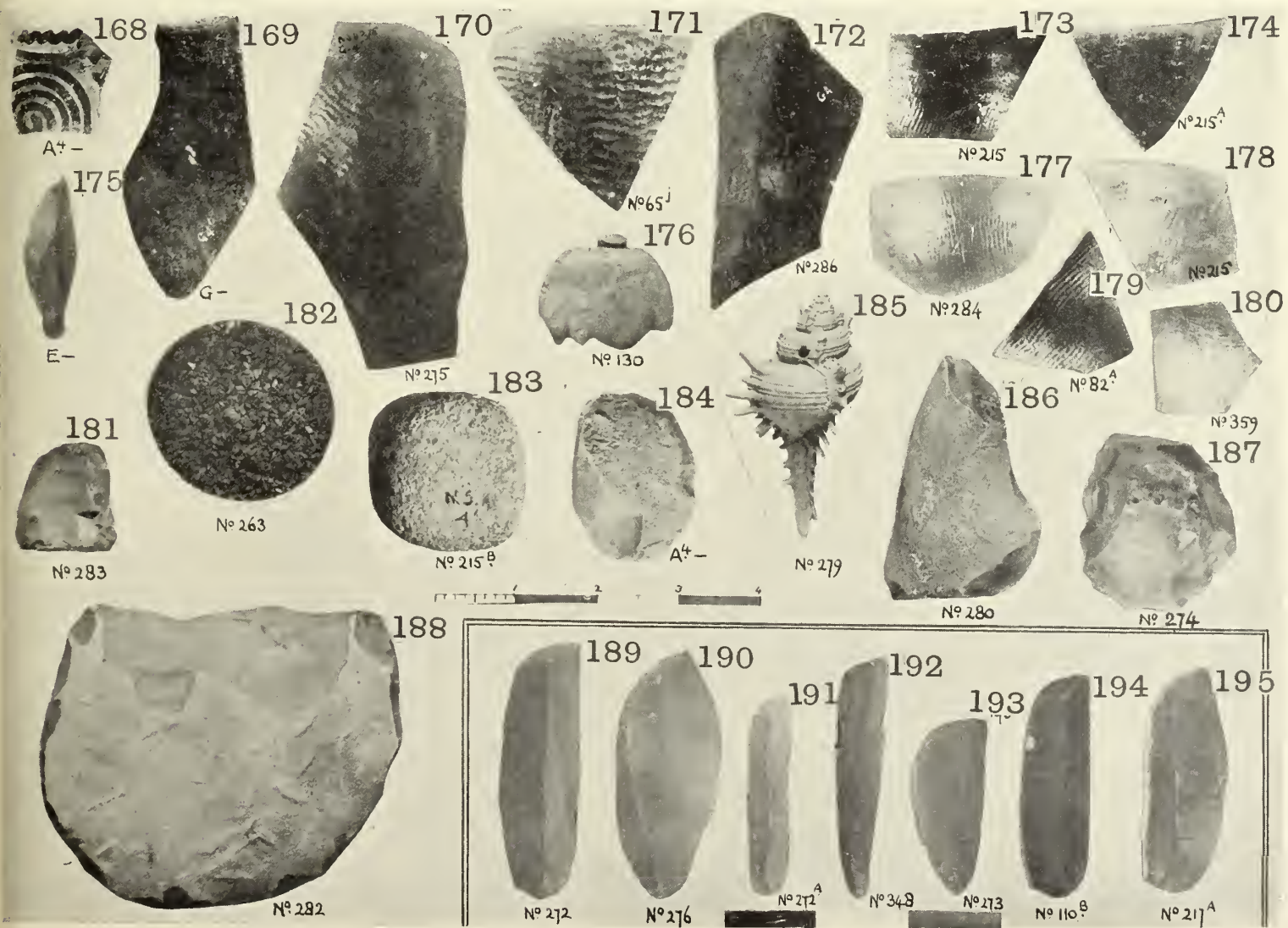


LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

OBJECTS FROM 3 FT. TO 3 FT. 6 IN.

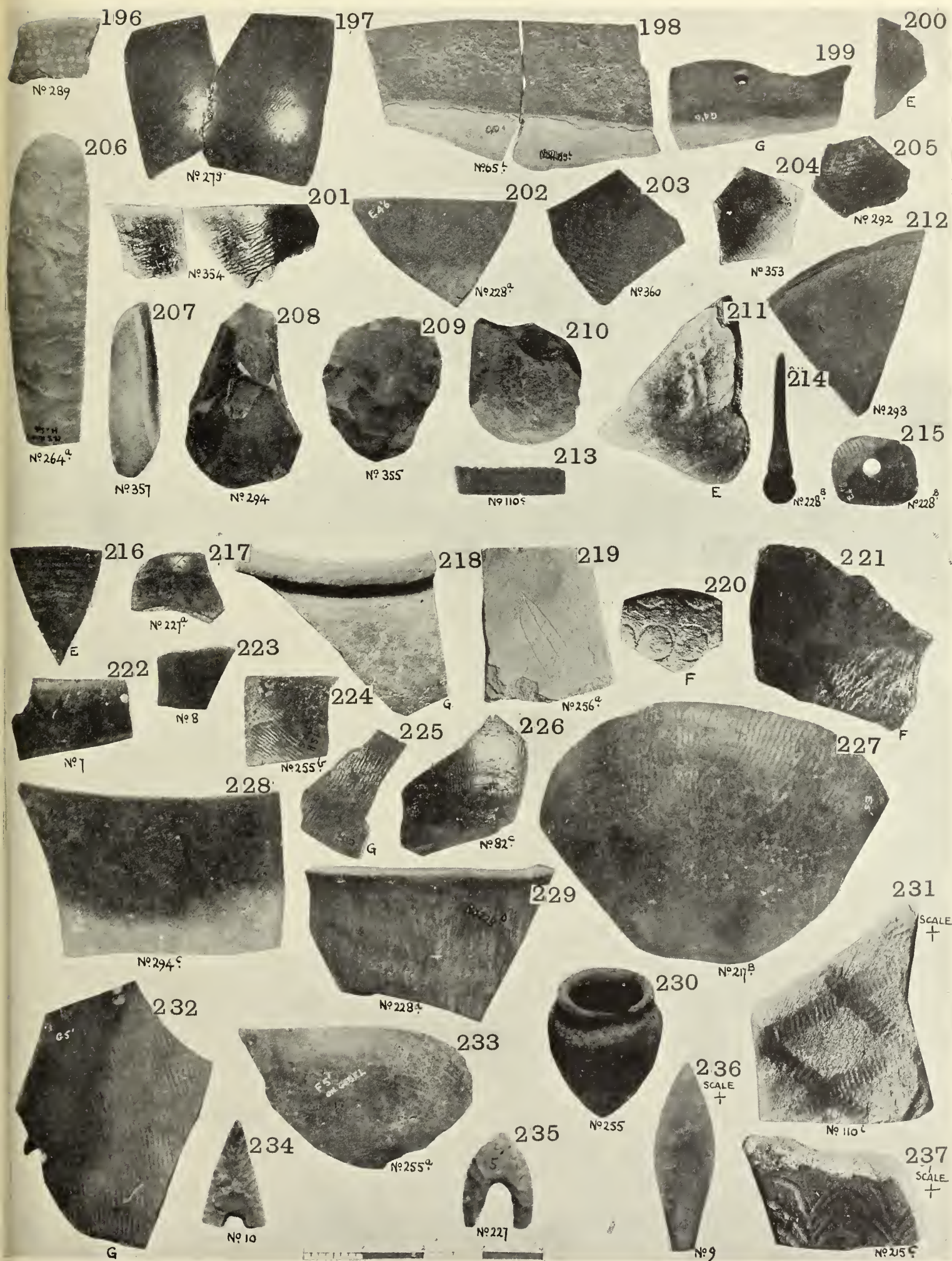


OBJECTS FROM 3 FT. 6 IN. TO 4 FT.



LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

OBJECTS FROM 4 FT. TO 4 FT. 6 IN.



LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

[illegible]

255 256 257 258 259

260 261 262 263 264 265

266 267 268 269 270 276

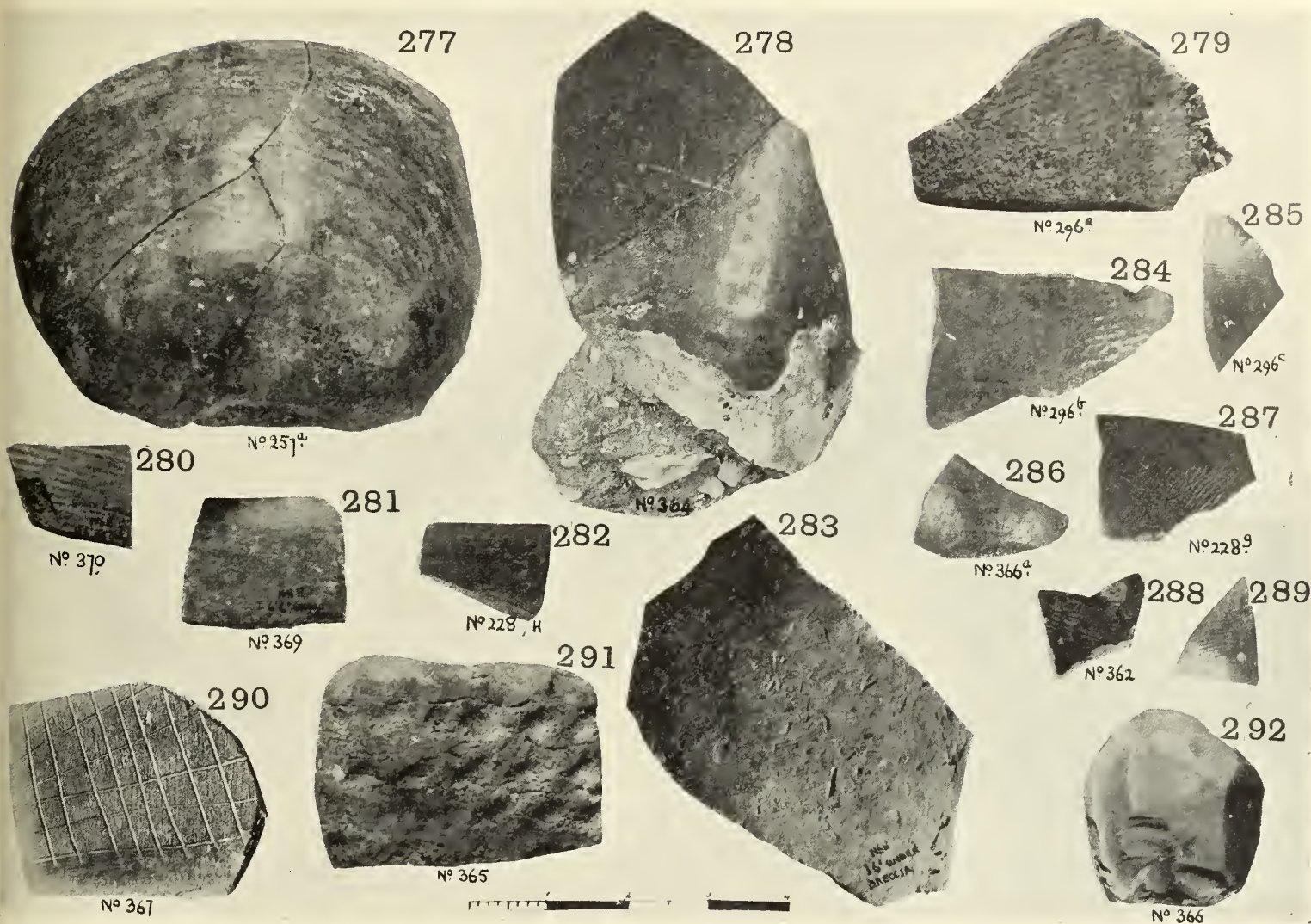
271 272 273 274 275

282

Scale bar: 0 1 2 3 4 5

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

OBJECTS FROM BENEATH BRECCIA



CIST BURIAL No. 117

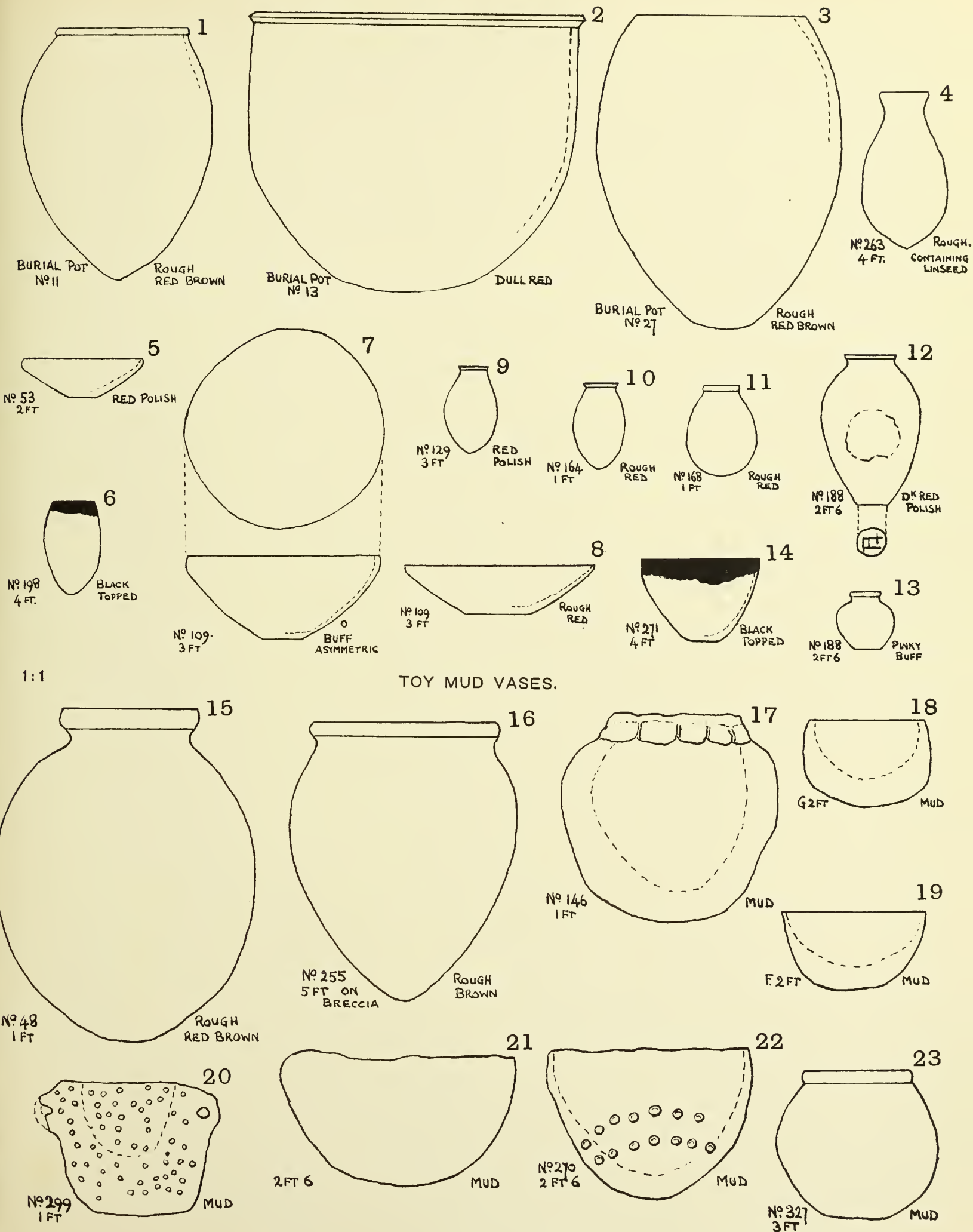


(1) CLEARANCE STAGE ONE. (2) CLEARANCE STAGE TWO

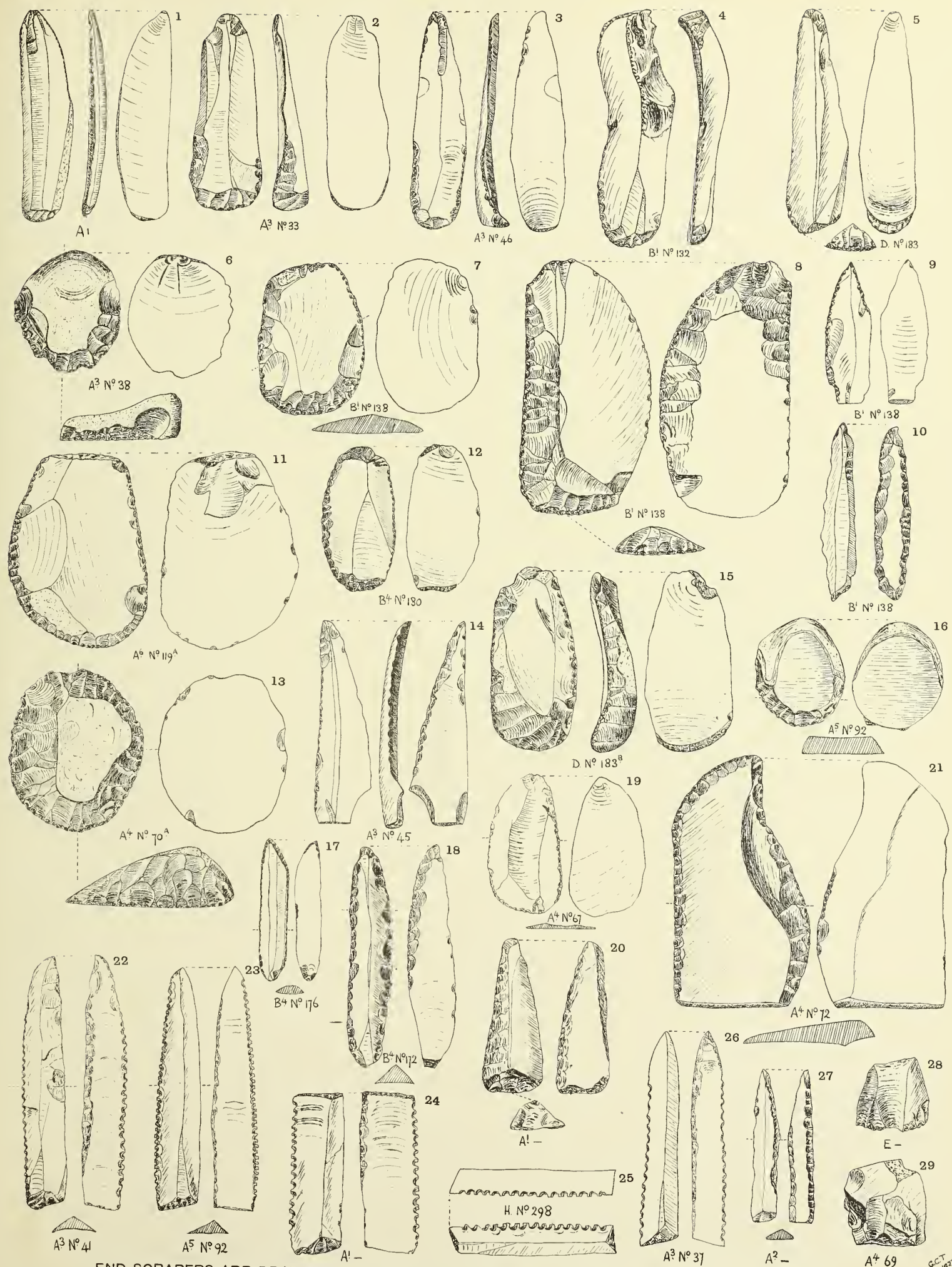


(3) CLEARANCE STAGE THREE

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

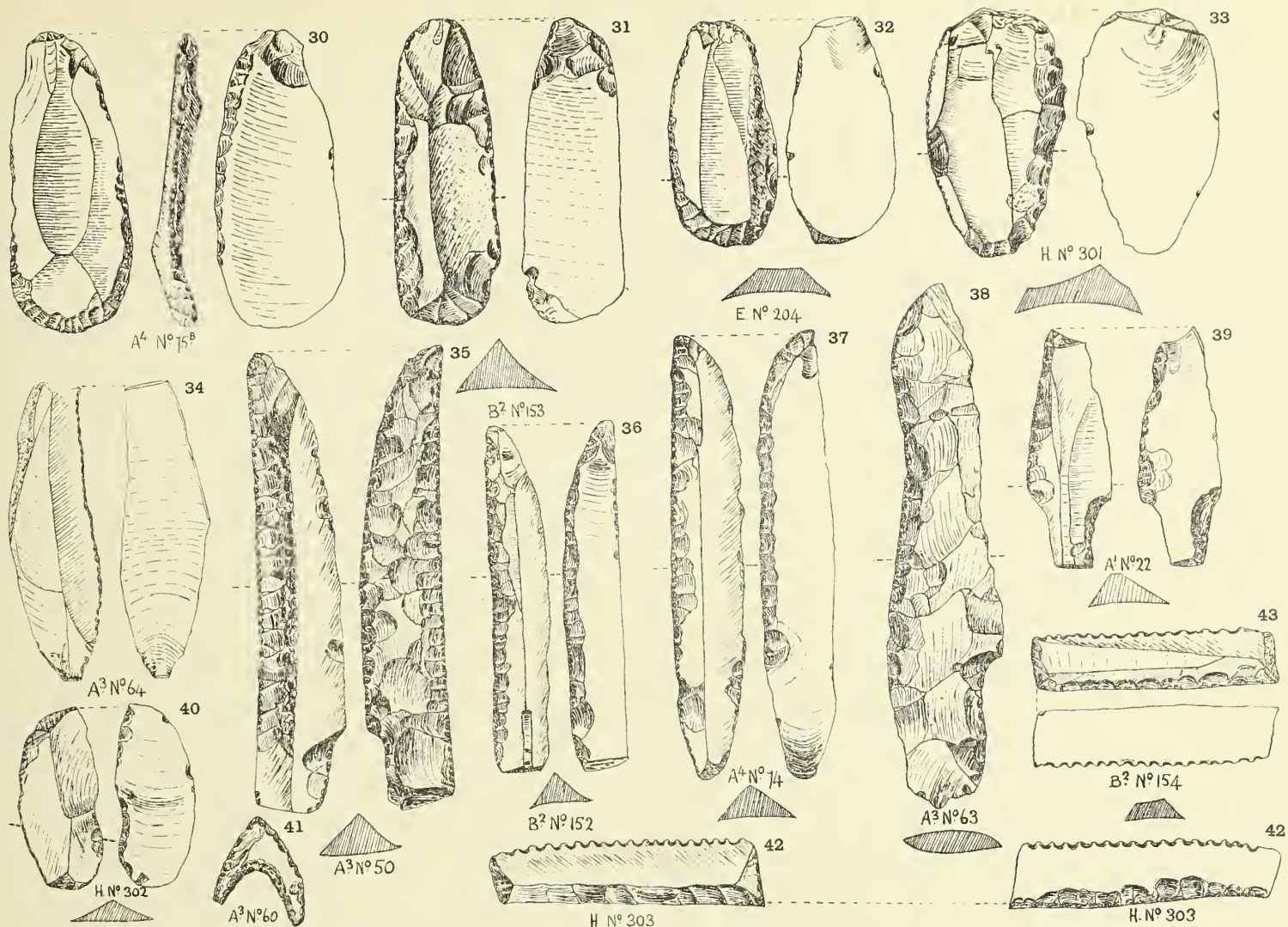


PROPERTY
OF THE
UNIVERSITY OF ILLINOIS

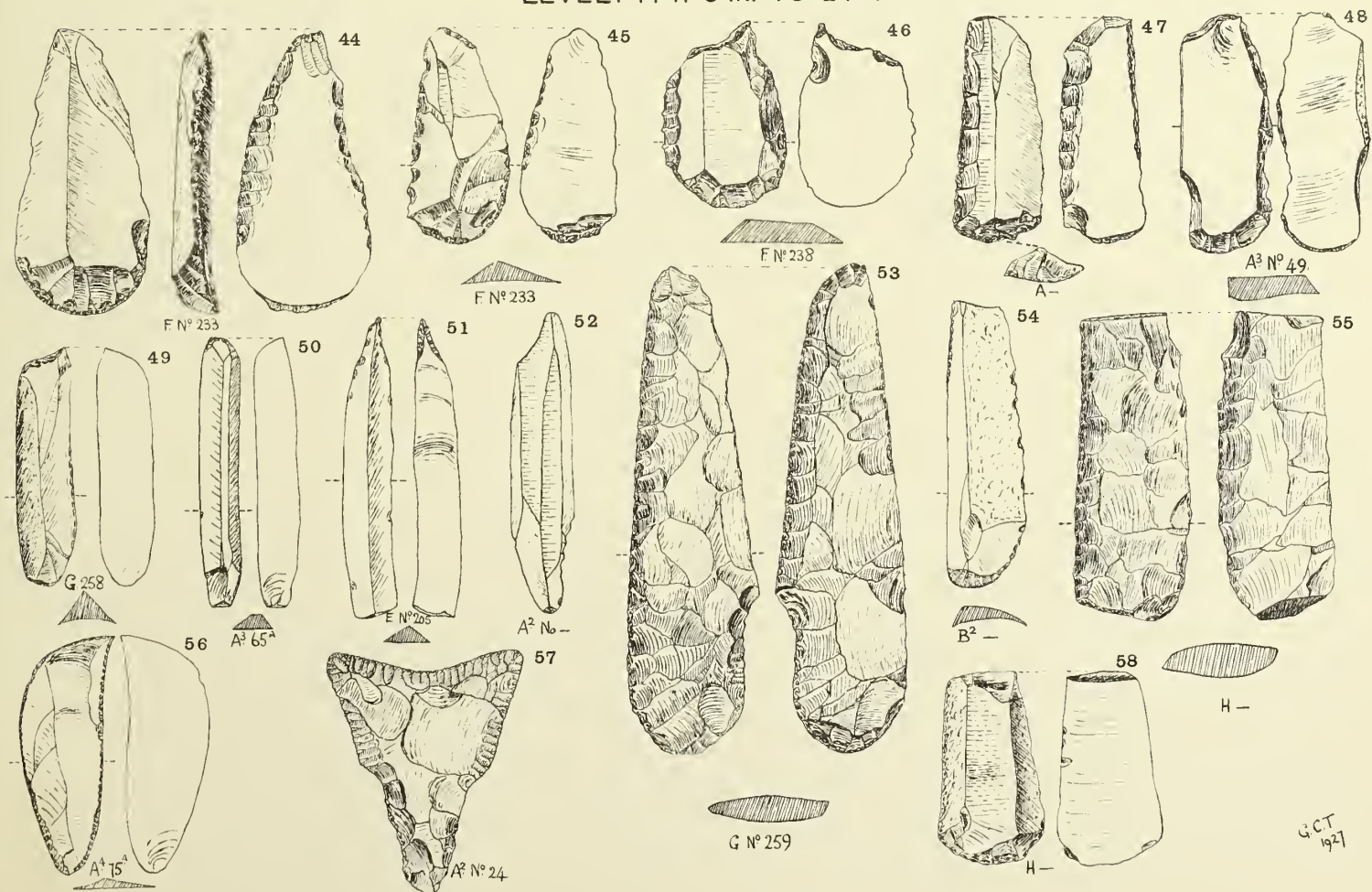


END SCRAPERS ARE DRAWN BUTT UPPERMOST, KNIVES AND BLADES WITH THE TIP UPPERMOST.

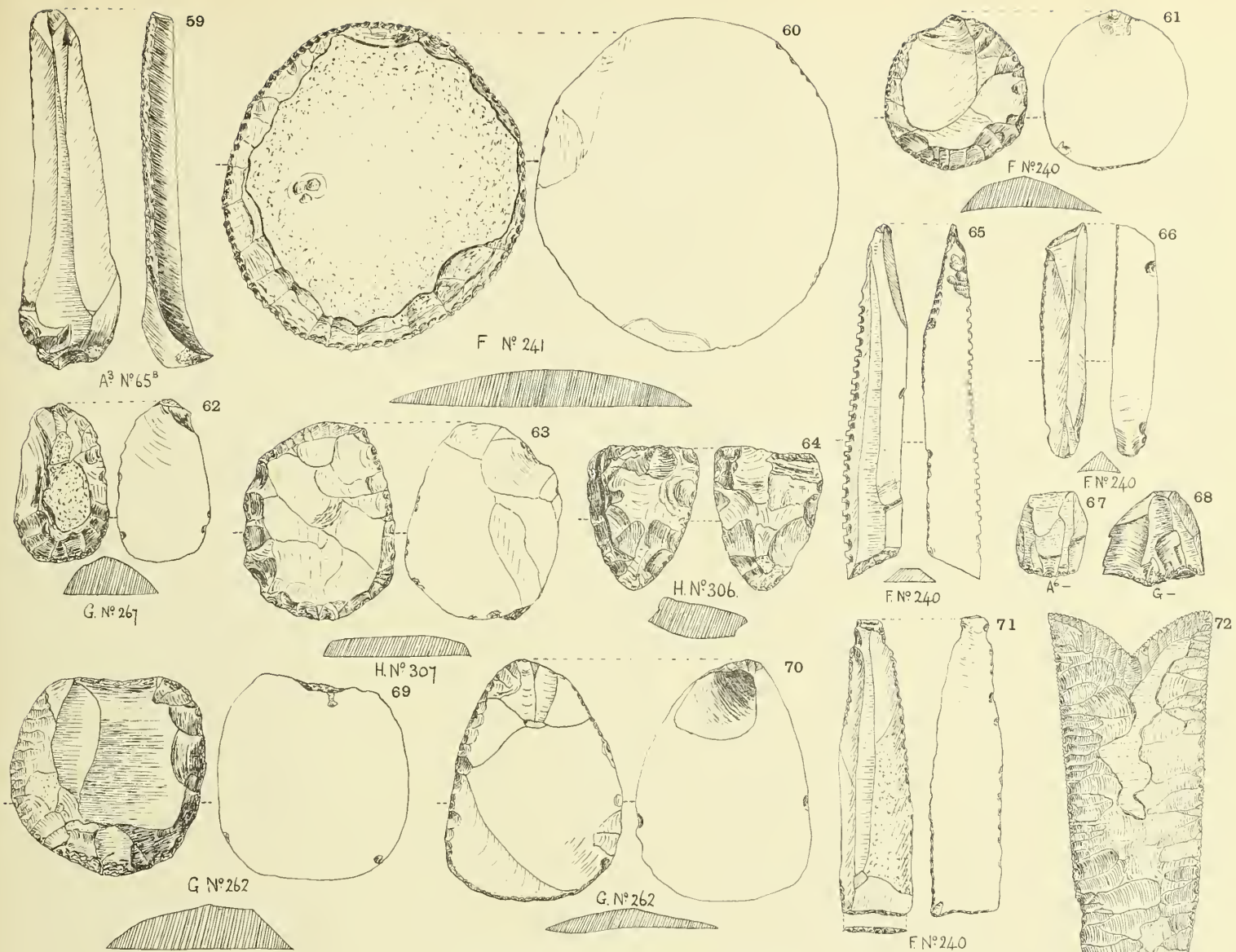
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



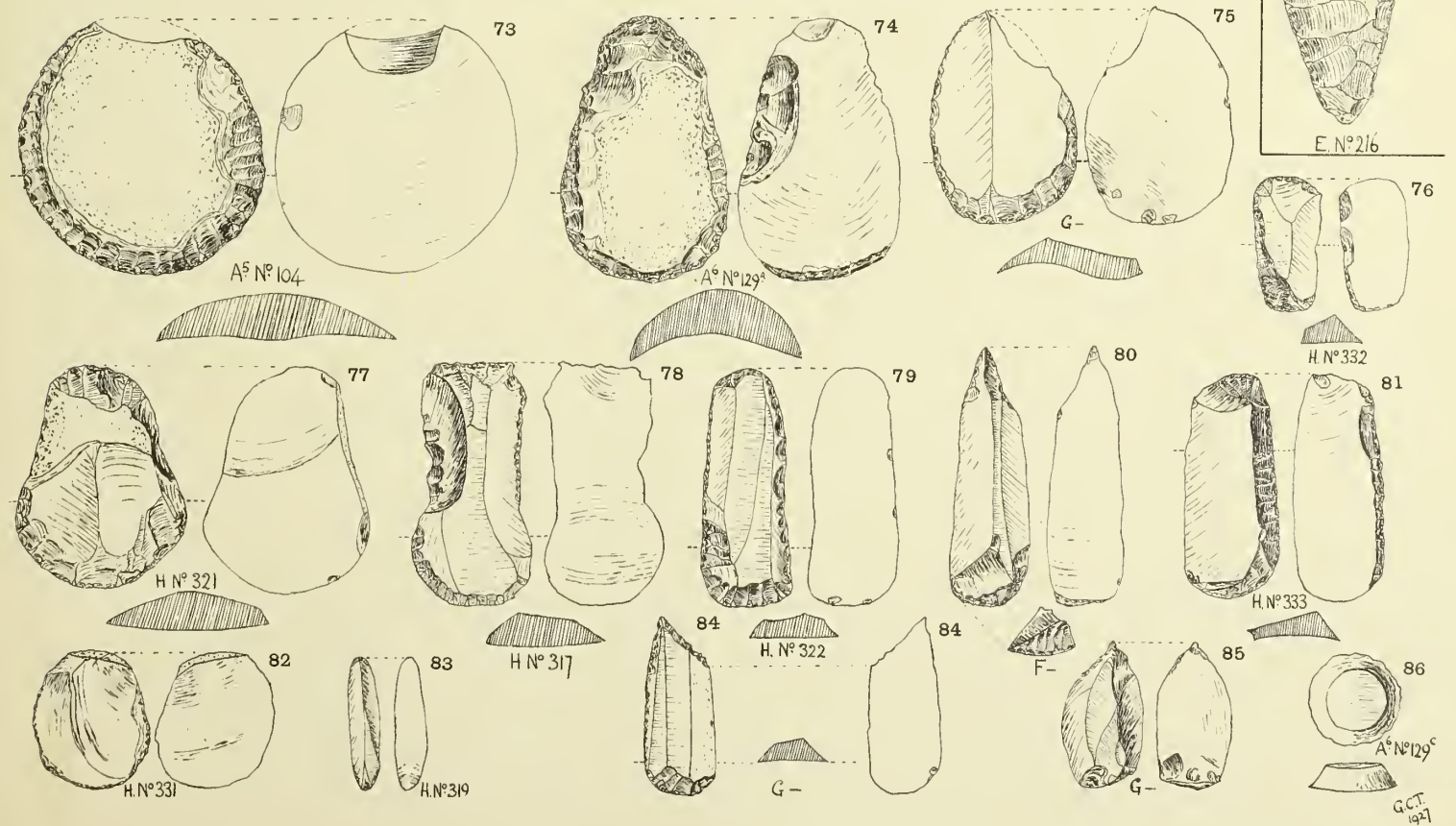
LEVEL: 1 Ft. 6 IN. TO 2 Ft.



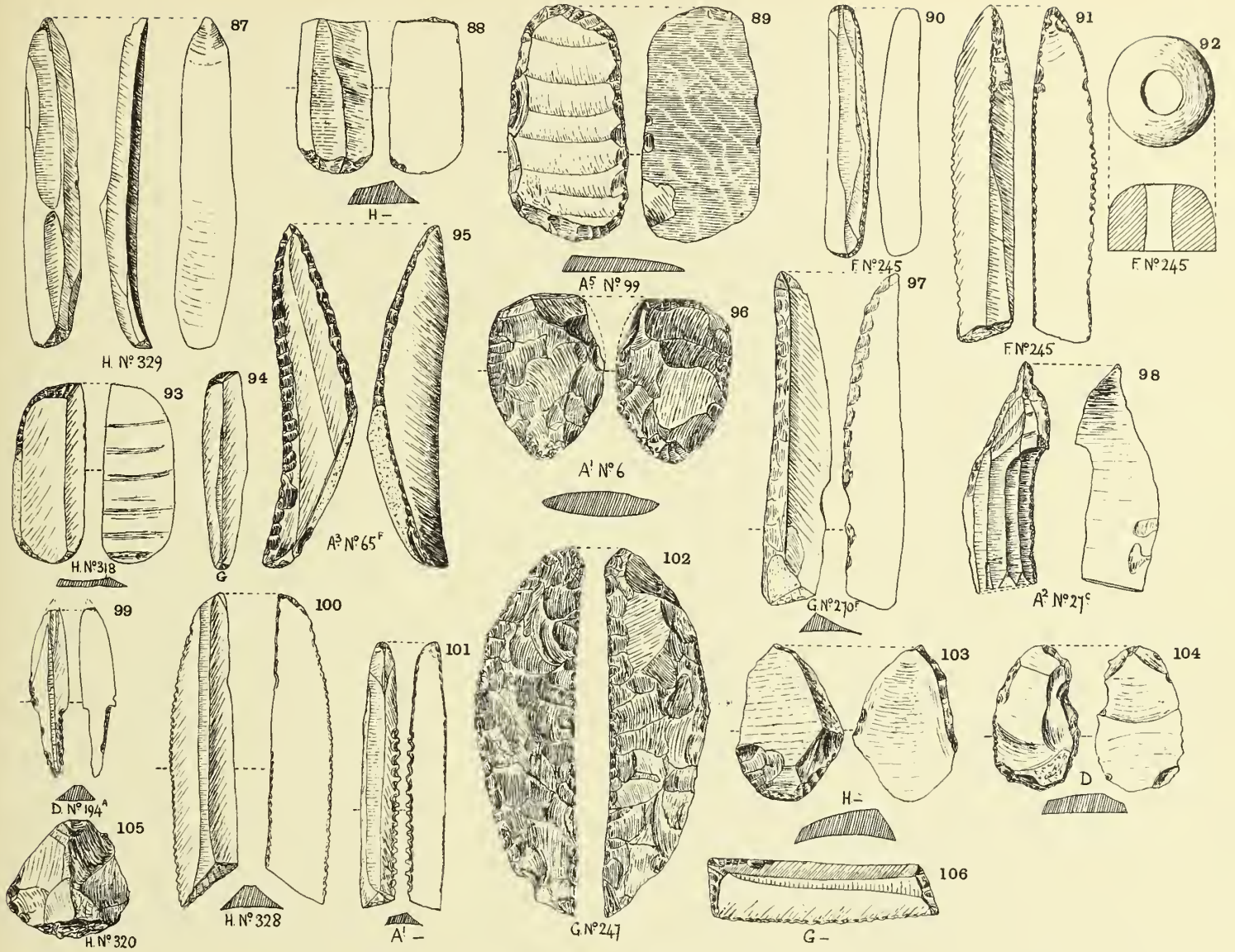
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



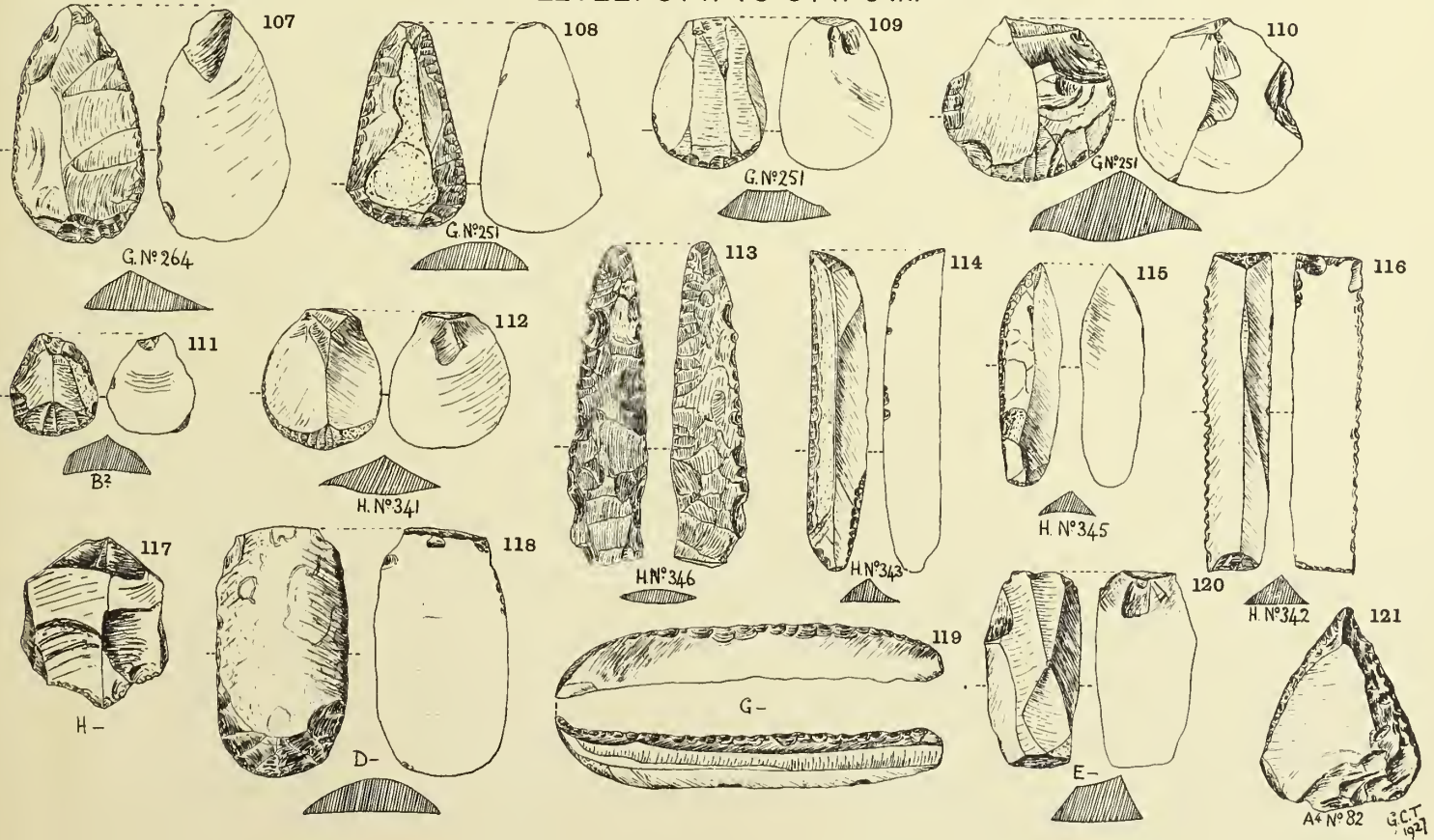
LEVEL: 2 Ft. 6 IN. TO 3 Ft.



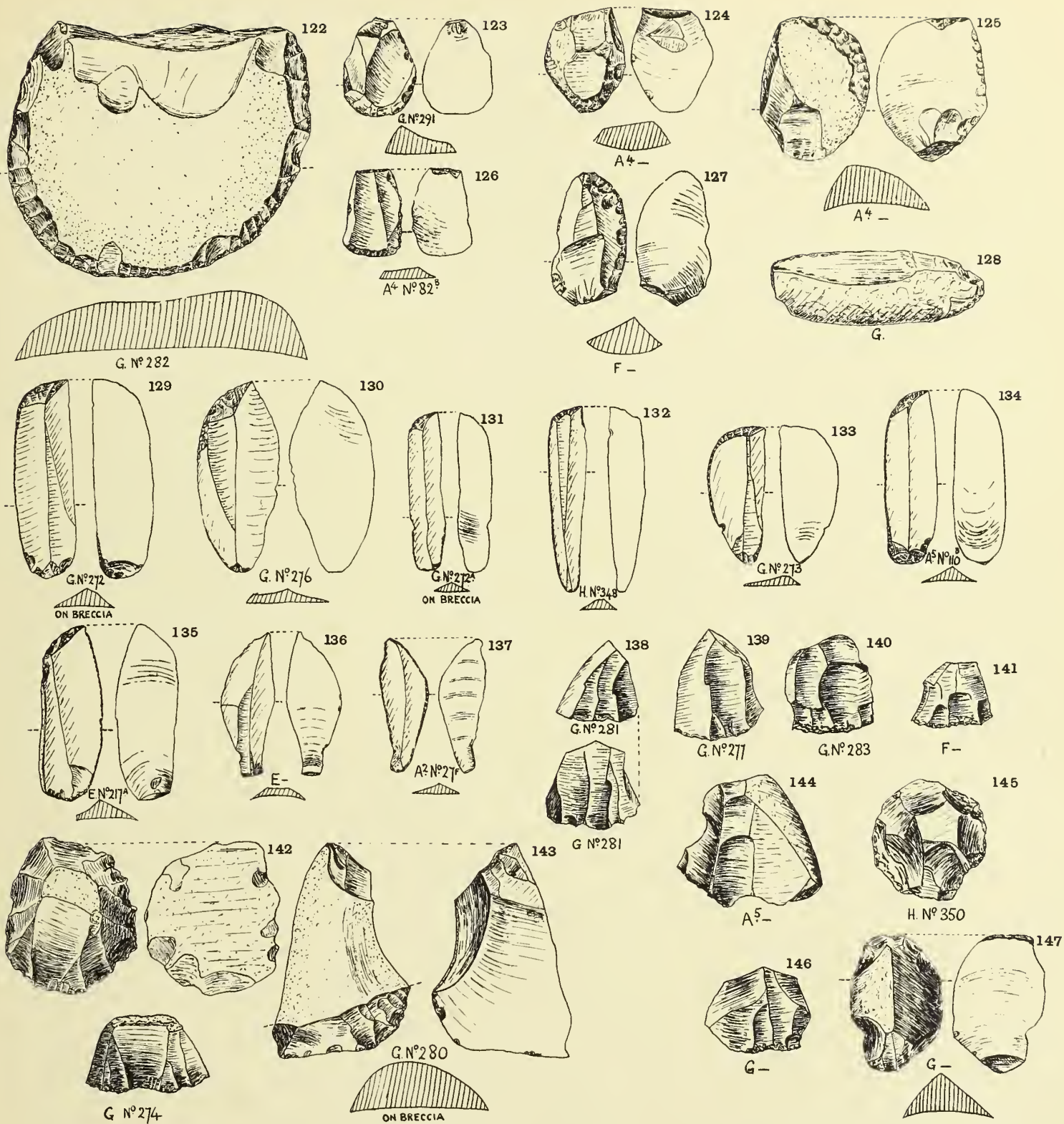
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



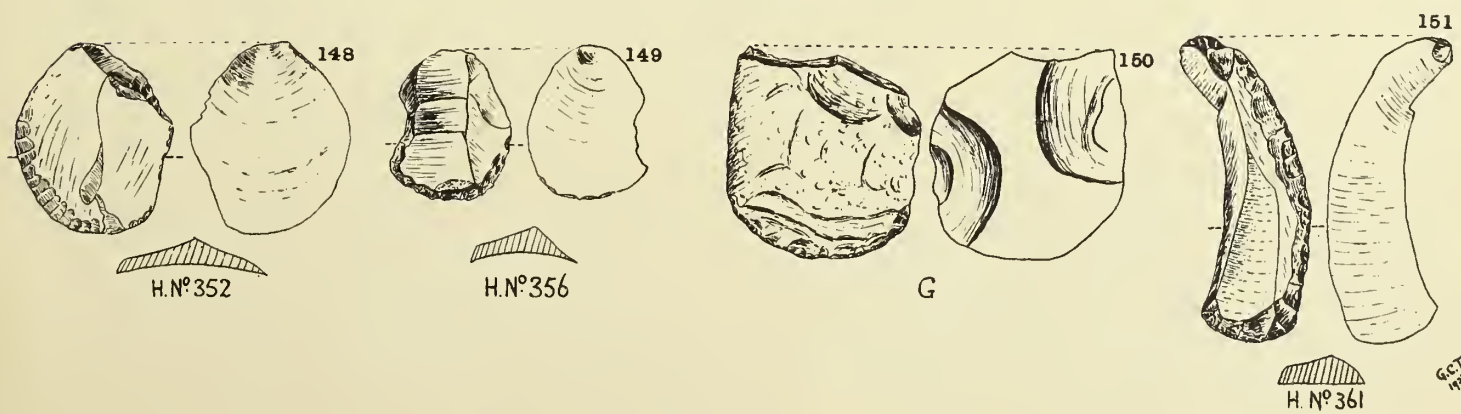
LEVEL: 3 FT. TO 3 FT. 6 IN.



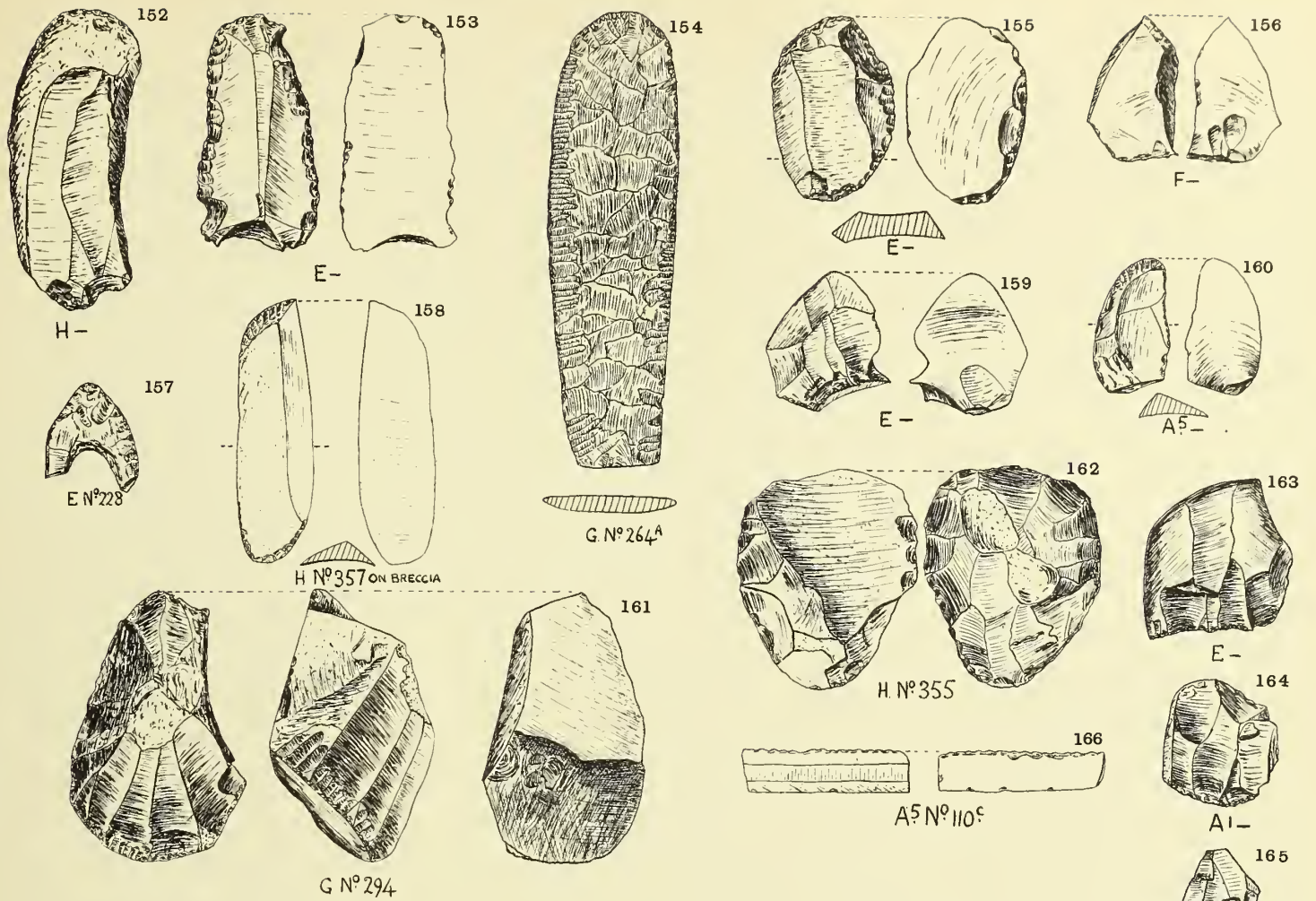
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



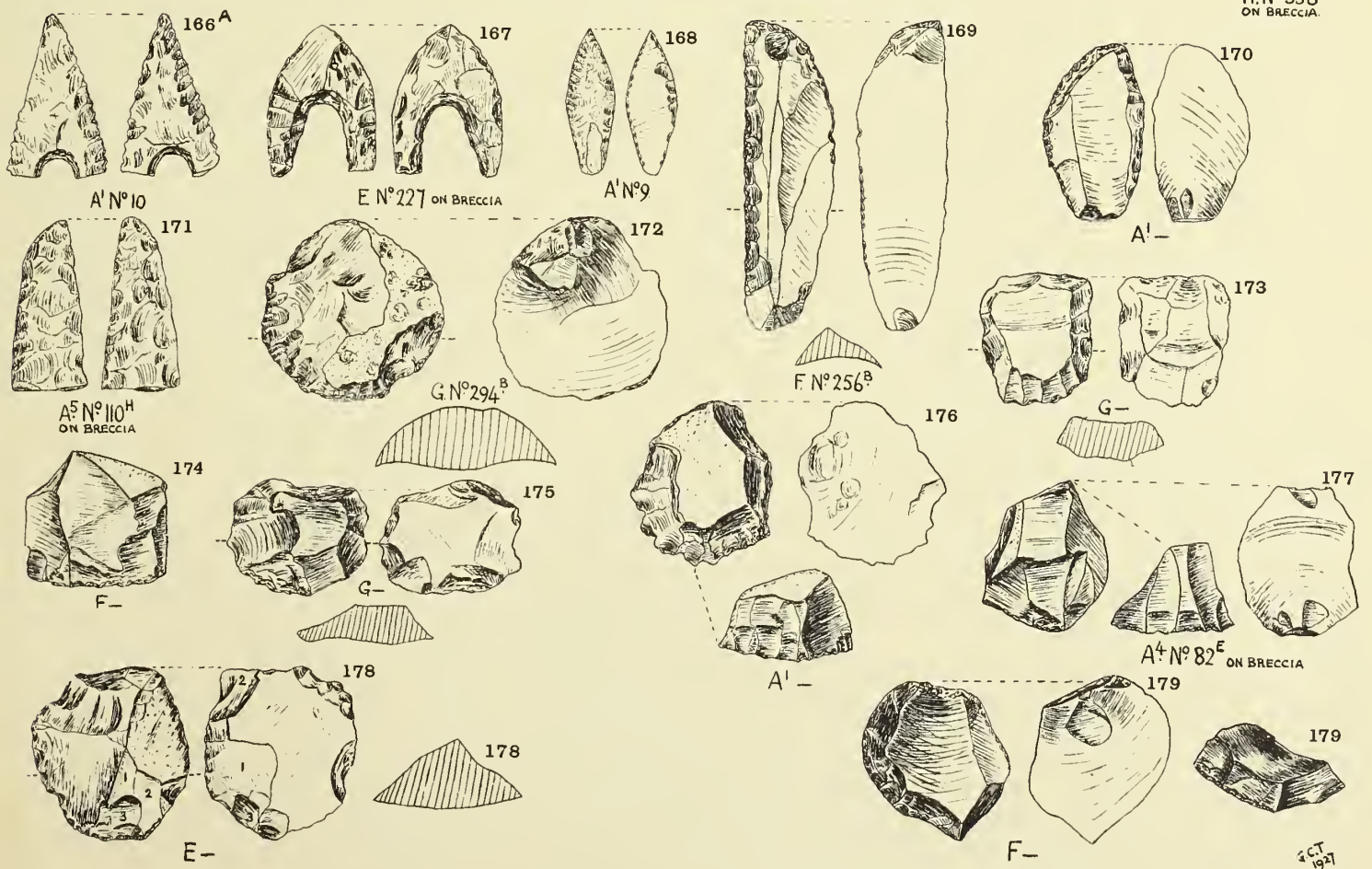
LEVEL: 4 FT. TO 4 FT. 6 IN.



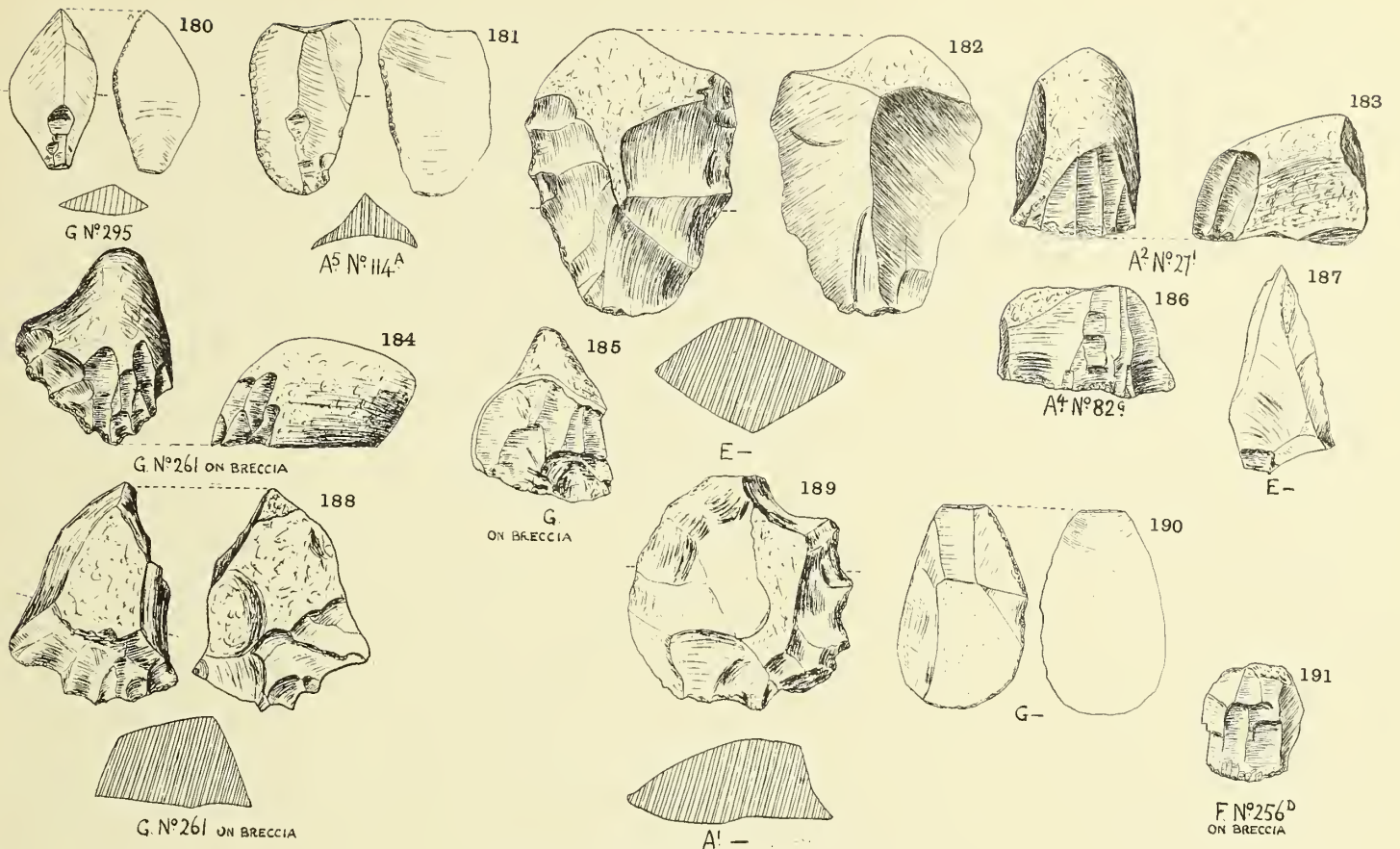
LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



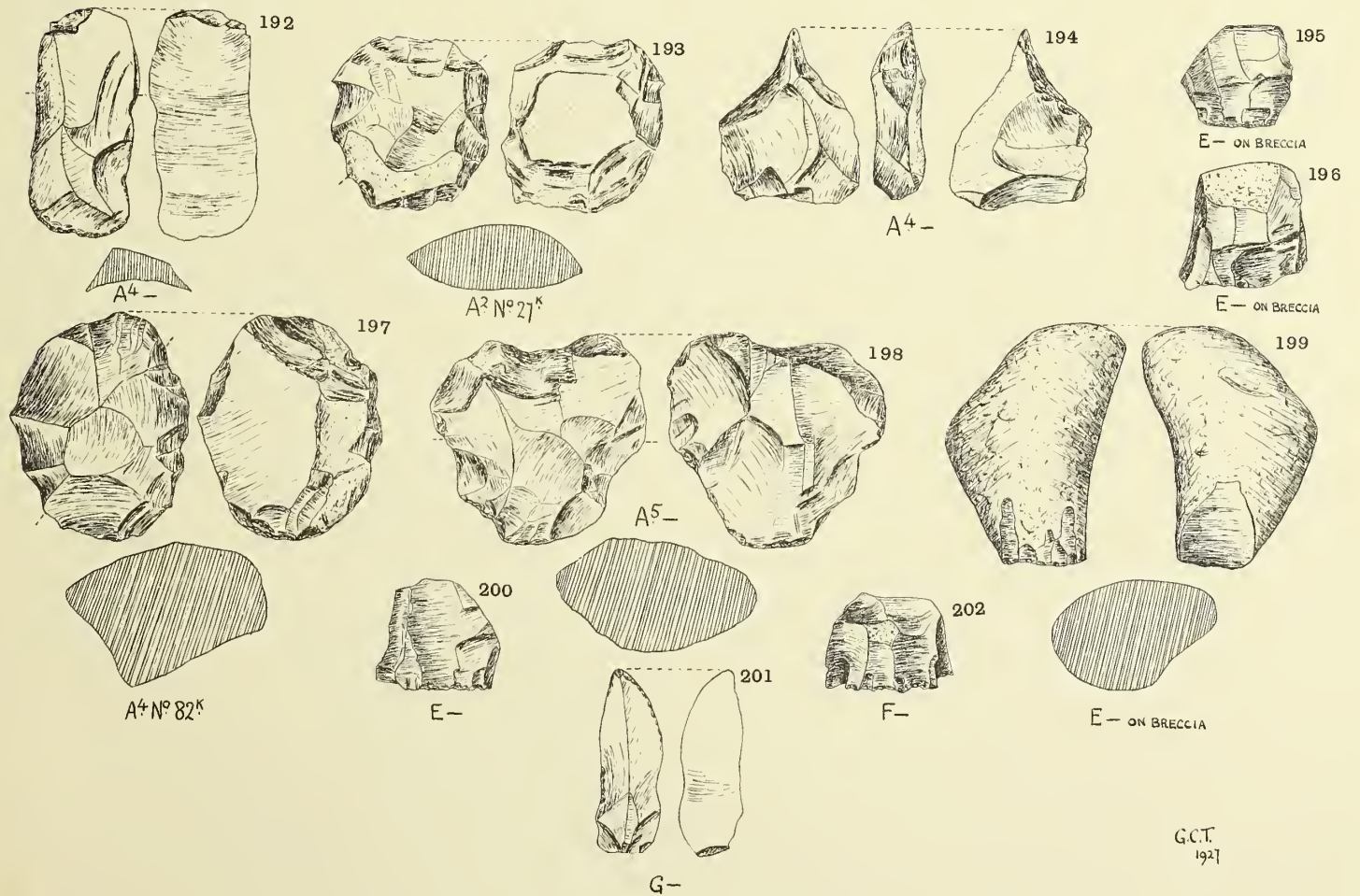
LEVEL: 4 FT. 6 IN. TO 5 FT.



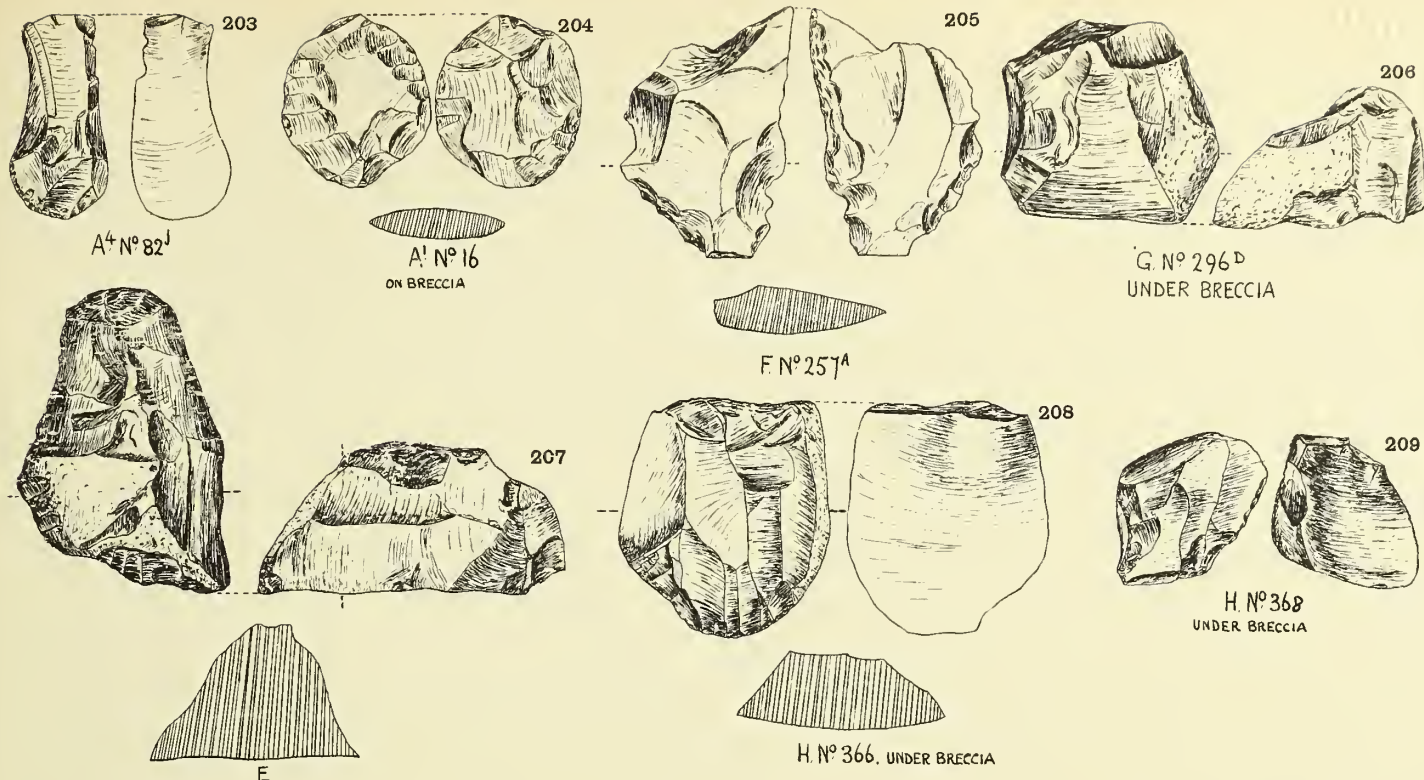
LIBRARY
OF THE
Smithsonian Institution



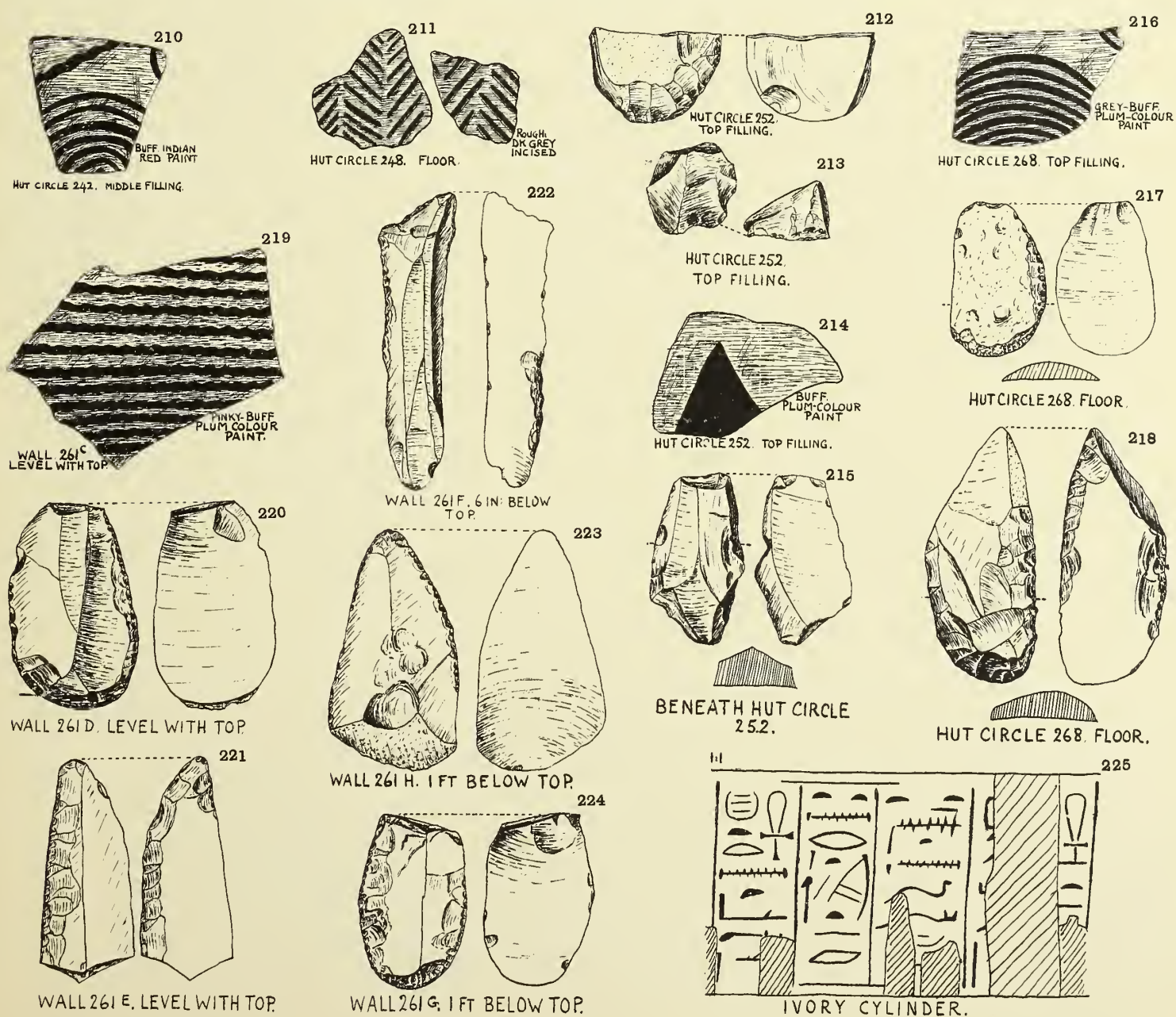
LEVEL: 5 FT. 6 IN. TO 6 FT.



LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



SHERDS AND FLINTS FROM HUTS AND FILLINGS.



LIBRARY
OF THE
UNIVERSITY OF ILLINOIS



PUBLICATIONS

OF THE EGYPTIAN RESEARCH ACCOUNT AND BRITISH SCHOOL OF ARCHAEOLOGY IN EGYPT

- I. BALLAS, 1895 ; by J. E. QUIBELL. (Out of print ; obtainable in joint volume **NAQADA AND BALLAS**, by W. M. FLINDERS PETRIE. 68 plates. 20s. *net*.)
- II. THE RAMESSEUM, 1896 ; by J. E. QUIBELL. (Out of print.)
- III. EL KAB, 1897 ; by J. E. QUIBELL.
- IV. HIERAKONPOLIS I, 1898 ; text by W. M. F. P. 43 plates. 20s. *net*.
- V. HIERAKONPOLIS II, 1899 ; by F. W. GREEN and J. E. QUIBELL. 39 plates (4 coloured and 20 photographic).
- VI. EL ARABAH, 1900 ; by J. GARSTANG. 40 plates. 16s. *net*. (Out of print.)
- VII. MAHASNA, 1901 ; by J. GARSTANG and KURT SETHE. 43 plates. (Out of print.)
- VIII. TEMPLE OF THE KINGS, 1902 ; by A. ST. GEORGE CAULFEILD. 24 plates. 16s. *net*. (Out of print.)
- IX. THE OSIREION, 1903 ; by MARGARET A. MURRAY. 37 plates. 25s. *net*.
- X. SAQQARA MASTABAS I, 1904 ; by M. A. MURRAY ; and GUROB, by L. LOAT. 64 plates. 30s. *net*.
- XI. SAQQARA MASTABAS II, 1905 ; by HILDA PETRIE. (*In preparation*.)
- XII. HYKSOS AND ISRAELITE CITIES, 1906 ; by W. M. FLINDERS PETRIE and J. GARROW DUNCAN. 40 plates. 25s. *net*. In double volume with 94 plates. 45s. *net*. (This latter is out of print.)
- XIII. GIZEH AND RIFEH, 1907 ; by W. M. FLINDERS PETRIE. 40 plates. 25s. *net*. In double volume with 109 plates. 50s. *net*.
- XIV. ATHRIBIS, 1908 ; by W. M. FLINDERS PETRIE, J. H. WALKER, and E. B. KNOBEL. 43 plates. 25s. *net*. (Out of print.)
- XV. MEMPHIS I, 1908 ; by W. M. F. PETRIE and J. H. WALKER. 54 plates. 25s. *net*.
- XVI. QURNEH, 1909 ; by W. M. F. PETRIE and J. H. WALKER. 56 plates. (Out of print.)
- XVII. THE PALACE OF APRIES (MEMPHIS II), 1909 ; by W. M. FLINDERS PETRIE and J. H. WALKER. 35 plates. 25s. *net*.
- XVIII. MEYDUM AND MEMPHIS (III), 1910 ; by W. M. F. PETRIE, E. MACKAY, and G. WAINWRIGHT. 47 plates. 25s. *net*.
- XIX. HISTORICAL STUDIES, 1910. 25 plates. 25s. *net*. (Studies, vol. ii.)
- XX. ROMAN PORTRAITS (MEMPHIS IV), 1911 ; by W. M. F. PETRIE. 32 plates. 25s. *net*.
- XXI. THE LABYRINTH AND GERZEH, 1911 ; by W. M. F. PETRIE, E. MACKAY, and G. WAINWRIGHT. 52 plates. 25s. *net*.
- XXII. PORTFOLIO OF HAWARA PORTRAITS. 24 coloured plates. 50s. *net*.
- XXIII. TARKHAN I AND MEMPHIS V, 1912 ; by W. M. F. PETRIE. 81 plates. 25s. *net*.
- XXIV. HELIOPOLIS I AND KAFR AMMAR, 1912 ; by W. M. F. PETRIE. 58 plates. 25s. *net*.
- XXV. RIQQUEH AND MEMPHIS VI, 1913 ; by R. ENGELBACH, HILDA PETRIE, M. A. MURRAY, and W. M. F. PETRIE. 62 plates. 25s. *net*.
- XXVI. TARKHAN II, 1913 ; by W. M. F. PETRIE. 72 plates. 25s. *net*.
- XXVII. LAHUN I, THE TREASURE, 1914 ; by GUY BRUNTON. 23 plates (8 coloured). 63s. *net*.
- XXVIII. HARAGEH ; by R. ENGELBACH and B. GUNN. 81 plates. 25s. *net*.
- XXIX. SCARABS AND CYLINDERS, 1915 ; by W. M. F. PETRIE. 73 plates. 52s. *net*.
- XXX. TOOLS AND WEAPONS, 1916 ; by W. M. F. PETRIE. 76 plates. 35s. *net*.
- XXXI. PREHISTORIC EGYPT, 1917 ; by W. M. F. PETRIE. 53 plates. 25s. *net*.
- XXXII. CORPUS OF PREHISTORIC POTTERY ; by W. M. F. PETRIE. 58 plates. 25s. *net*.
- XXXIII. LAHUN II, THE PYRAMID, 1920 ; by W. M. F. PETRIE, G. BRUNTON, M. A. MURRAY. 75 plates. 25s. *net*.
- XXXIV. SEDMENT I ; by W. M. F. PETRIE and G. BRUNTON. 47 plates. 25s. *net*.
- XXXV. SEDMENT II ; by W. M. F. PETRIE and G. BRUNTON. 43 plates. 25s. *net*.
- XXXVI. THE GOSPEL OF ST. JOHN, COPTIC MS. ; by SIR HERBERT THOMPSON. 80 plates. 25s. *net*.
- XXXVII. TOMBS OF THE COURTIER AND OXYRHYNKHOS ; by W. M. F. PETRIE, ALAN GARDINER, HILDA PETRIE, and M. A. MURRAY. 55 plates. 25s. *net*.
- XXXVIII. BUTTONS AND DESIGN SCARABS ; by FLINDERS PETRIE. 30 plates. 25s. *net*.
- XXXIX. ANCIENT WEIGHTS AND MEASURES ; by FLINDERS PETRIE. 54 plates. 40s. (Univ. Coll.)
- XL. GLASS STAMPS AND WEIGHTS ; by FLINDERS PETRIE. 26 plates. 25s. (Univ. Coll. only.)
- XLI. GUROB ; by GUY BRUNTON and R. ENGELBACH. 53 plates. 25s. *net*.
- XLII. OBJECTS OF DAILY USE ; by FLINDERS PETRIE. 62 plates. 50s. *net*.
- XLIII. GERAR ; by FLINDERS PETRIE. 72 plates. 50s. *net*.
- XLIV. QAU AND BADARI I ; by GUY BRUNTON, ALAN GARDINER, and F. PETRIE. 49 plates. 25s. *net*.
- XLV. QAU AND BADARI II ; by GUY BRUNTON. 55 plates. 25s. *net*.

Subscriptions of One Guinea for the Annual Single Volumes, or Two Guineas for the Two Annual Volumes, are received by the Hon. Secretary, at the Edwards Library, University College, Gower Street, London, W.C., where also copies of the above works can be obtained.